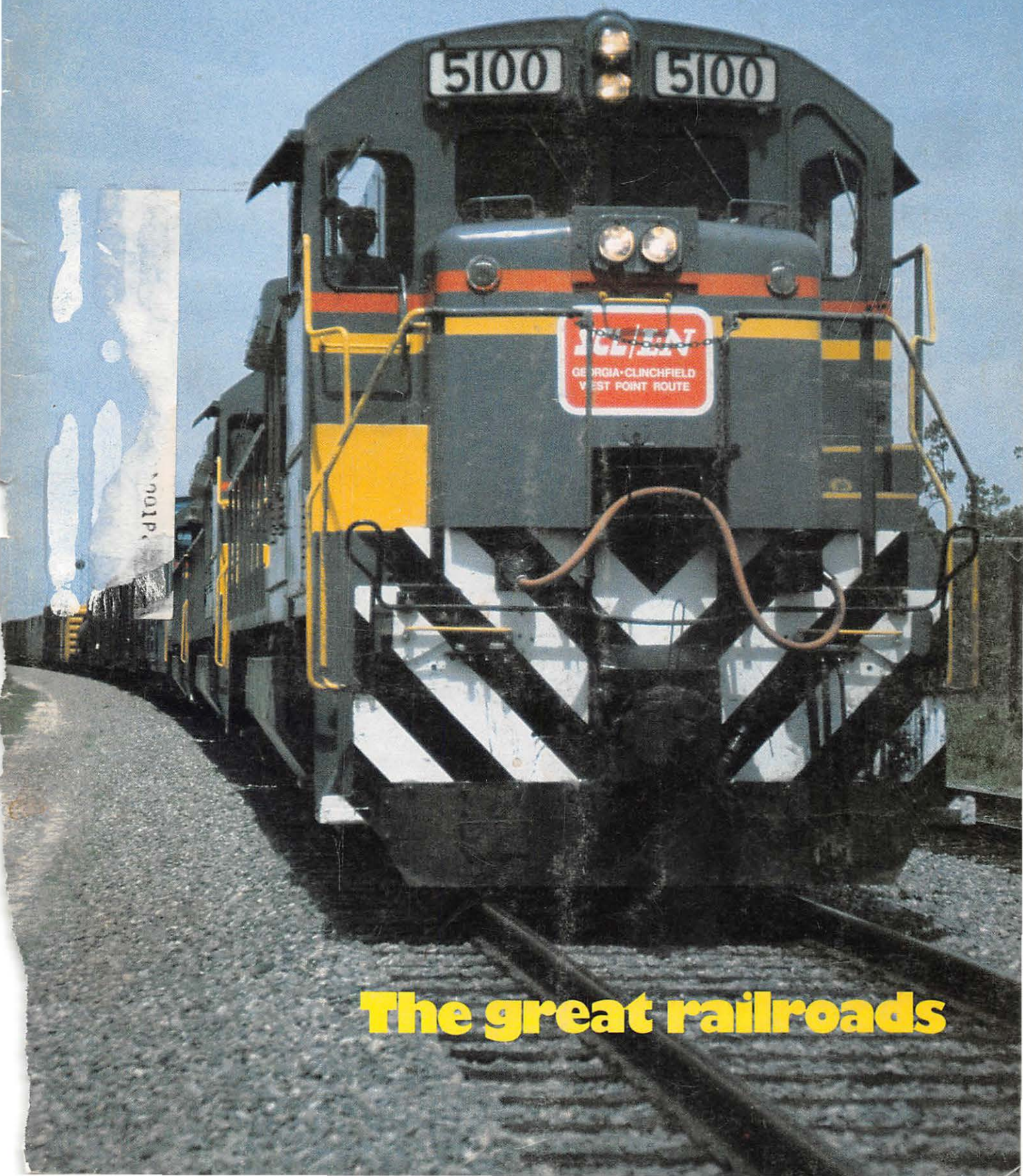
MOVING PEOPLE: What's right (and wrong) with transit marketing

September 10, 1979

RAILWAY AGE



The great railroads

"Cardwell Westinghouse helps us turn repair orders around fast."

—George Wiseman, V.P. Operations, Transitank Car Corporation.

Since 1969, Transitank Car Corp. has built a good reputation making fast repairs on time and on budget.

"We're a little company that doesn't overload itself," says George Wiseman, V.P. Operations of Transitank Car Corp. "And we don't make promises we can't keep. Even when your work is outstanding, you can lose good customers because of broken promises."

Cardwell Westinghouse understands the contract shop business.

And the pressure to deliver on time. "When we need replacement draft gears, they come without delay from Cardwell Westinghouse," notes Wiseman, "even in today's tight supply market.

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Products you can count on.
"I can honestly say I don't believe we've ever had a complaint about Cardwell Westinghouse products. And we use them all. Exclusively.

"When Cardwell Westinghouse has a record like that, why change?"

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Nearly one million Cardwell Westinghouse Mark Series draft gears are working hard today for over 300 railroads, private car-owners and utilities. And when those draft gears finally do need attention, we can recondition them to be good as new.

No company is too big, or too small, to benefit from the leading ways of Cardwell Westinghouse. For more information on our entire line of draft gears, call your Cardwell Westinghouse representative. Or contact us direct at 332 South Michigan Avenue, Chicago, Illinois 60604, (312) 427-5051. In Canada, Canadian Cardwell, Lachine, Quebec.

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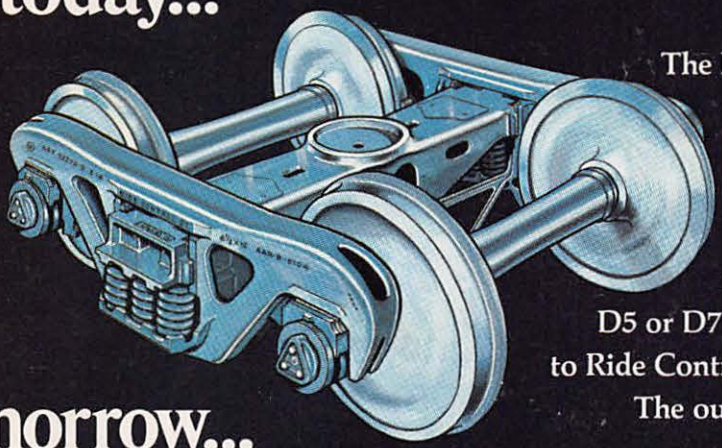
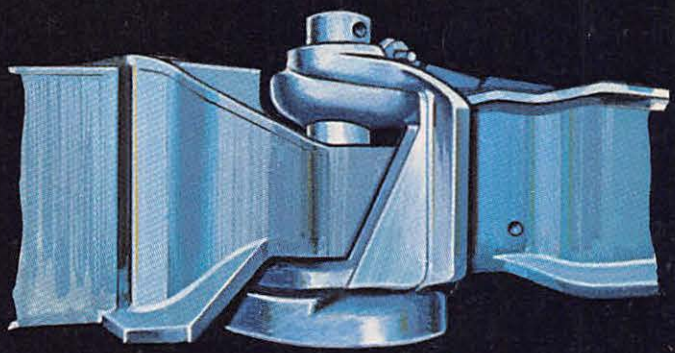


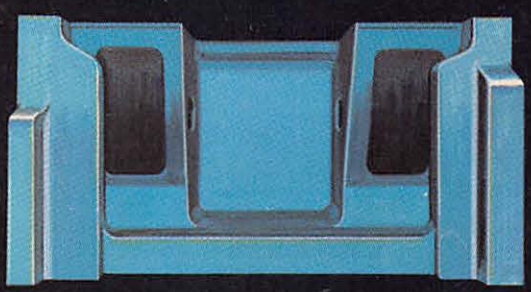
The Ride Control® Truck: Good for over 600,000 low maintenance miles in most applications, with high squaring power for good natural hunting control. Available with the nine position spring group, and either D5 or D7 springs. All these features are unique to Ride Control, all standard, all money savers. The outstanding result of 35 years of evolution.

tomorrow...

Articulated Connectors are hardly new, but articulated freight equipment is. These units, already proving themselves in revenue service, make possible a variety of innovative, problem solving car designs. Especially effective in intermodal equipment.



and the day after tomorrow!



Bolster Slope Wear Liners, up to now, have always been welded in place. A time consuming method, and not always reliable. ASF has developed the techniques needed to produce "cast-in-place" liners. Less expensive and, we expect, a lot more reliable. They are going into test on unit trains now.

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WE'VE MOVED A LOT OF EQUIPMENT AND SYSTEMS.

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WE'VE BEEN MOVING SINCE 1904.

For 75 years we've been designing, manufacturing, marketing, installing, expanding, modernizing, and pioneering—all with one objective: improve railroad efficiencies, safety, and profitability.

WE'VE MOVED TO CONTROL COST.

Along with providing the broadest product line in the industry, we've also moved our employees to give their best. That's one reason GRS quality is consistently high. And why GRS expertise is universally respected. GRS managers, engineers, manufacturing and planning personnel are behind every piece of GRS equipment, every GRS system you invest in.

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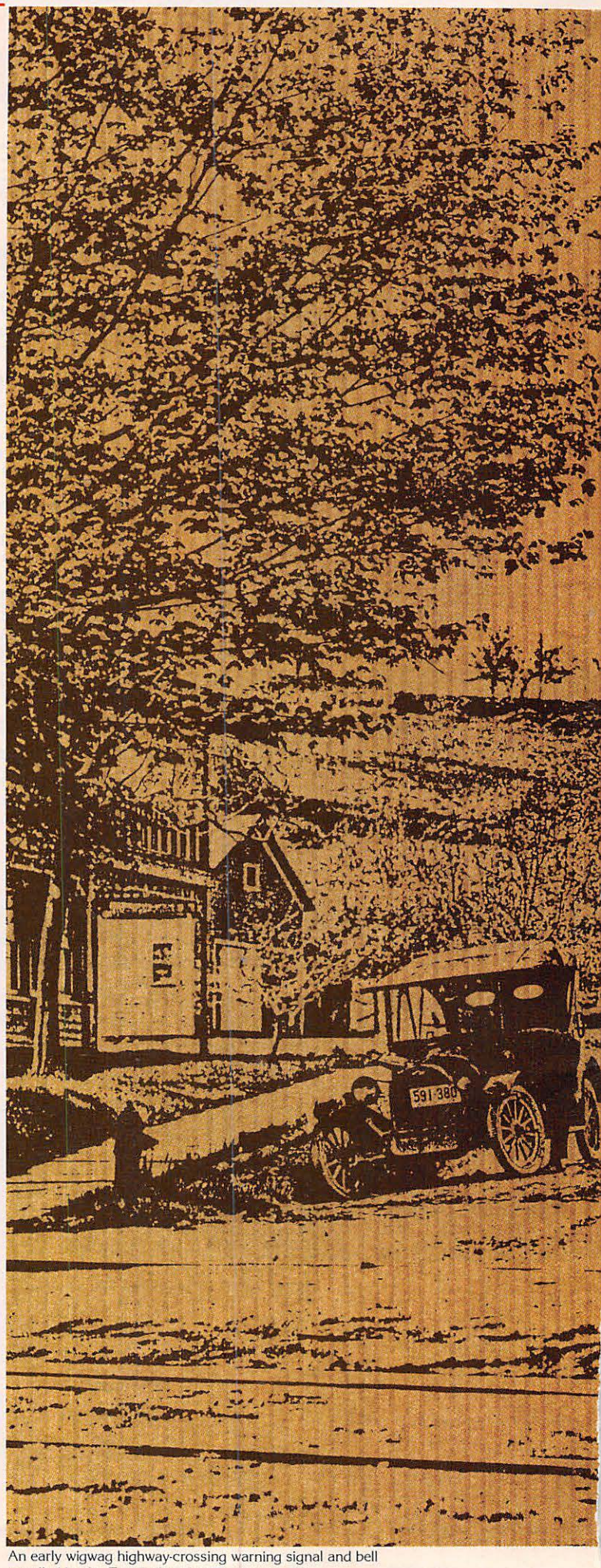

An early wigwag highway-crossing warning signal and bell installed by the Erie Railroad at Thompson, Pa.

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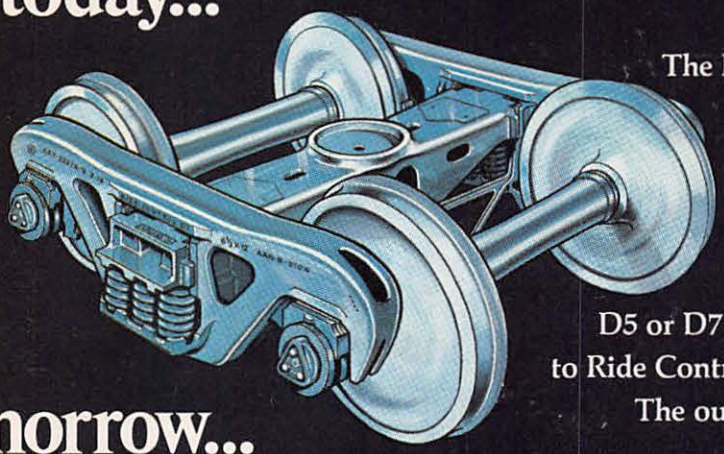

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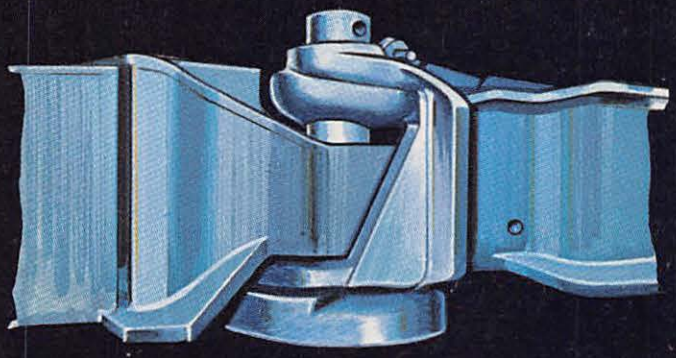

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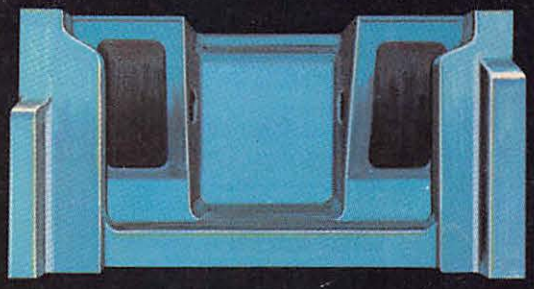

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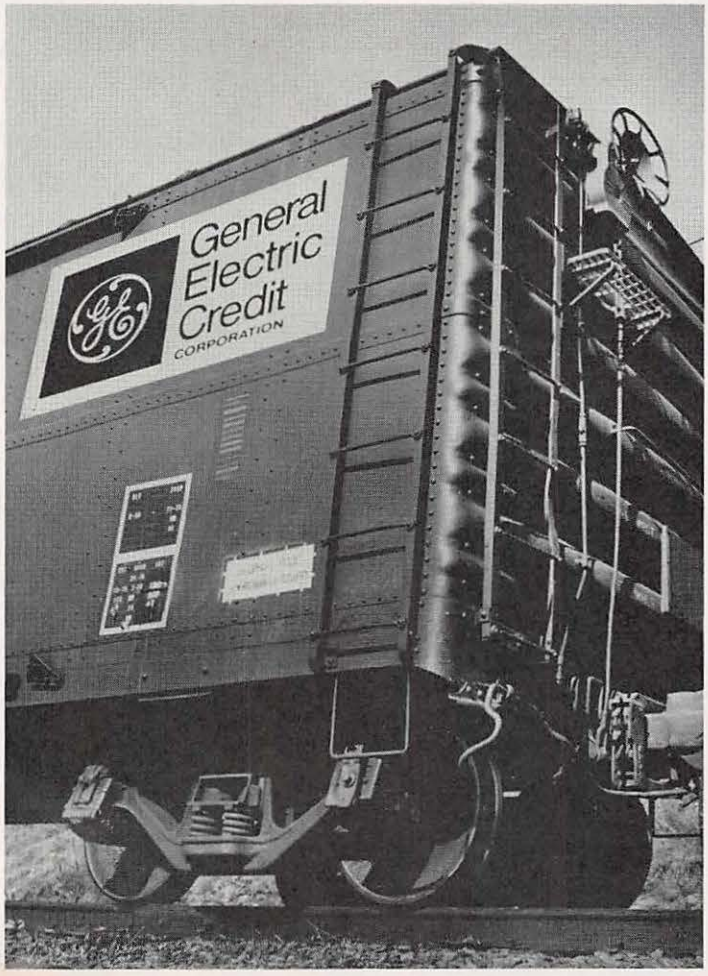

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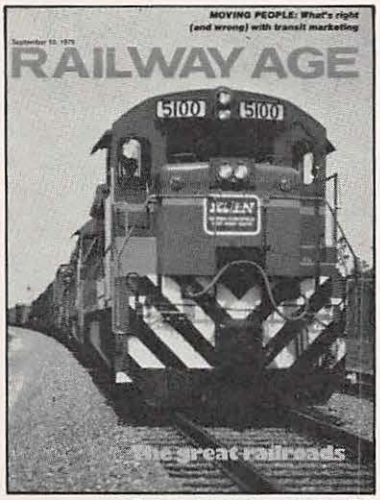
RAILWAY AGE

September 10, 1979

FEATURES



Cover article, page 28

Page 48

Page 94

28 The great railroads

SCL/LN GEORGIA-CLINCHFIELD WEST POINT ROUTE

The Family Lines roads—particularly the Louisville & Nashville—have gone through some difficult times recently, but management's long-term strategy is now beginning to pay off. Among the signs of success: a 92.7% operating ratio and a 5-6% return on investment.

48 RSA and RSS mount equipment shows in Chicago

In words and pictures Railway Age previews some of the products—including new lines of locomotives and freight cars—that more than 200 suppliers will exhibit at shows being staged in Chicago this month by the Railway Supply Association and the Railway System Suppliers.

84 What's right (and wrong) with transit marketing

John E. Warrington, marketing director for the Washington Metro and chairman of APTA's marketing committee, takes a candid look at the transit marketing state of the art, and concludes, among other things, that "We've not learned how to market marketing."

94 Railview: A rebirth of passenger car manufacturing?

Amtrak President Alan S. Boyd points out that (1) the market for railroad passenger cars is rising and (2) most U.S. passenger car builders are no longer in business—and calls on bankers to help reestablish a car-manufacturing capability in this country.

118 Milwaukee: Rescue by surgery?

A trustee's plan now on file with the ICC and the reorganization court in Chicago calls for a system slightly more than one-third the size of the existing network.

NEWS

4 Short and Significant
10 $5.4 billion pledged to rail from oil taxes
10 Car lessor unveils $110-million program
12 Watching Washington
12 Amtrak cuts six routes
14 O'Neal questions Conrail position
98 Moving People
140 The Railroad Market

COMMENT

3 Inside
14 Lines on Labor

DEPARTMENTS

106 People in the News
112 Suppliers
114 Transit
126 100 Years Ago
132 Letters
140 Carloadings
142 Products Report
144 New Literature
143 Guide to Advertising

COVER: Family Lines merchandise freight pulls into Rice Yard at Waycross, Ga.

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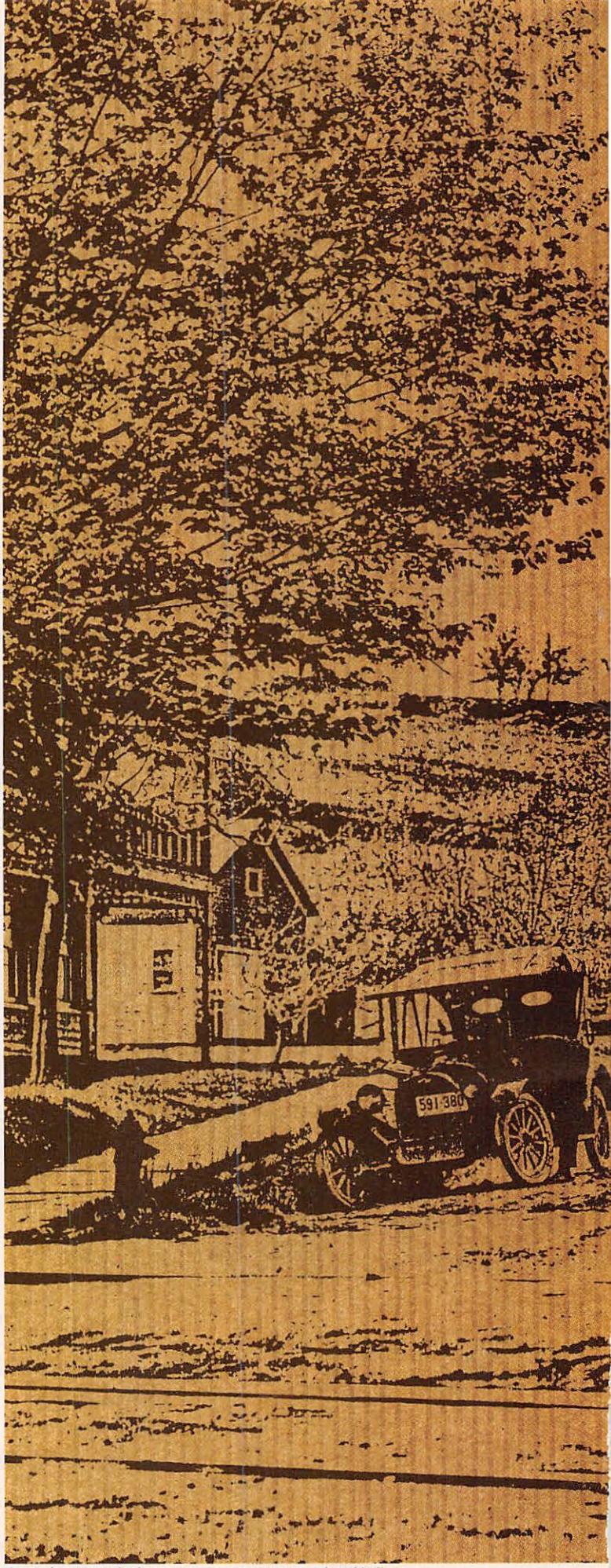

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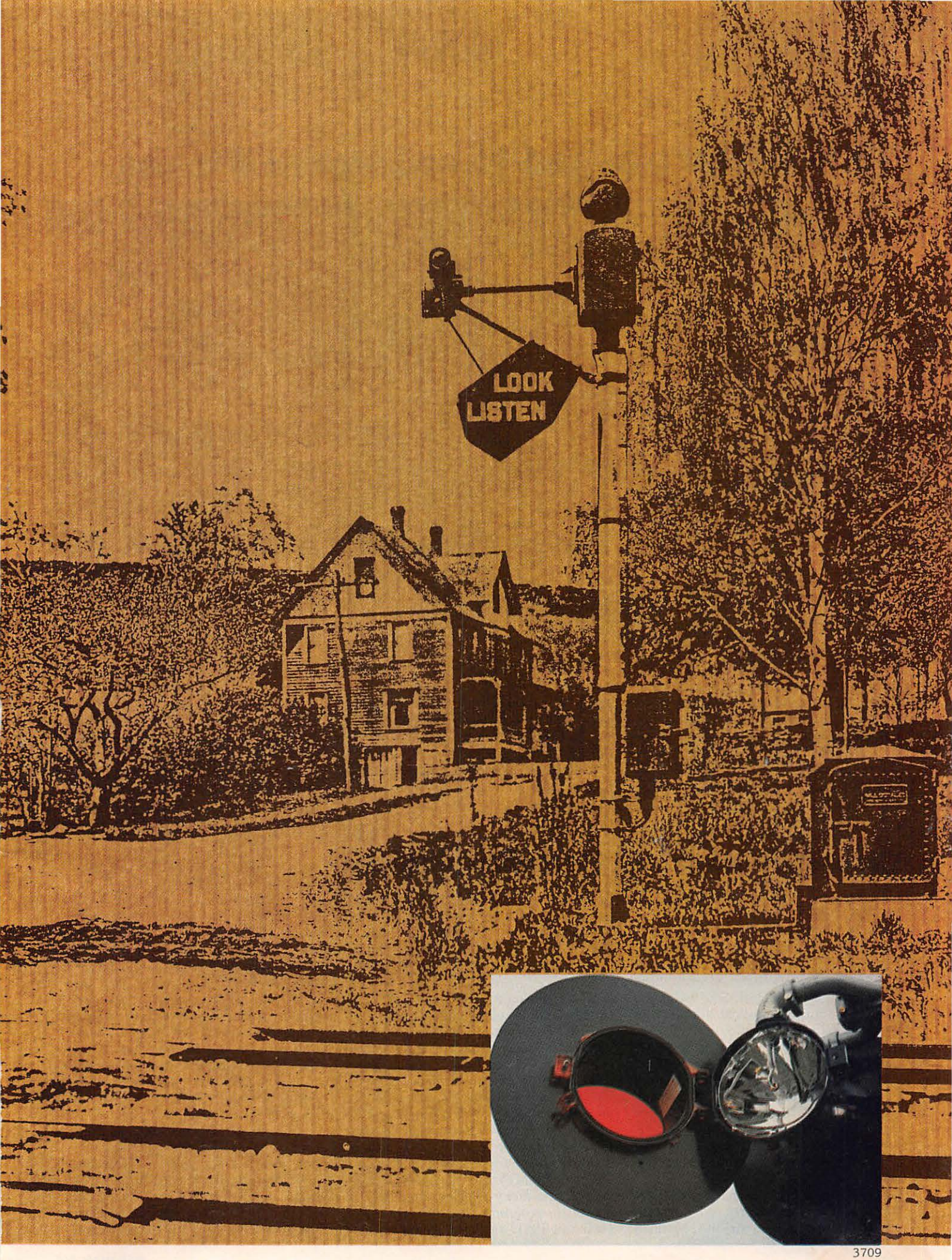

LOOK
LISTEN

$5.4 billion pledged to rail from oil taxes

About 35,000 railroad commuters pass through the old Lackawanna (now Conrail) terminal at Hoboken, N.J., on an average weekday, most of them traveling to or from their jobs in Manhattan. It is here that Port Authority Trans-Hudson (PATH) trains connect with Conrail trains serving the bedroom communities of northern New Jersey. And it was here, on Aug. 22, that Vice President Walter Mondale came to whip up support for the Carter Administration's proposed tax on "windfall" oil profits.

Why Mondale chose the cavernous waiting room at Hoboken was clear when he had delivered his message: If the tax on oil profits passes Congress, he pledged, the Administration will earmark $13 billion of the new revenues for improvements to mass transit over the next 10 years, including $5.4 billion to expand and modernize rail transit and commuter systems.

This was $3 billion more than the $10 billion that President Carter originally promised mass transit from the oil profits tax.

Mondale emphasized that the $13 billion would be in addition to around $27.5 billion that transit systems can expect in federal aid over the next decade under programs already in place, thus giving rail and bus transit a total of $40.5 billion in federal funds over the period. This would be matched by local funds totaling $9.5 billion, for a grand total of $50 billion.

Answering questions about his address in the terminal at Hoboken, Vice President Mondale was assisted by Assistant Secretary of Transportation Mortimer P. Downey (left), Representative Frank Guarini, New Jersey Governor Brendan Byrne, and Port Authority and PATH Chairman Alan Sagner.

The tax on "windfall" oil profits is a keystone of the President's energy program. It passed the House before Congress went home for its summer recess, but is believed to be in trouble in the Senate.

Mondale cautioned that the new money he was promising was conditioned entirely on passage of the new oil tax: "Without the windfall profits tax, all this is just rhetoric."

Mondale's audience at Hoboken included New Jersey Gov. Brendan Byrne, representatives of the Port Authority of New York and New Jersey, and officials from New Jersey cities, many of which have applications pending for federal transit aid.

Car lessor unveils $110-million program

United States Leasing International of San Francisco has announced that it will invest $110 million in new freight cars in a "significant expansion" of its car management and full-service car-leasing operations. Orders have already been placed with ACF, Thrall, and Richmond Tank Car for 1,650 covered hoppers and tank cars valued at $70 million. By Oct. 1, the company will place orders for gondolas and flatcars valued at $40 million. The company has no plans to acquire boxcars, its president, D.E. Mundell, said.

Deliveries of the new cars will start late this year and extend through 1981. Mundell said "sizable" additional car orders will be placed over the next several years.

U.S. Leasing has managed freight cars for its own account and for individual investors for around 10 years but, Mundell noted, it is better known in the industry as an underwriter of large lease transactions involving freight cars and locomotives. U.S. Leasing has helped arrange financing for about 40,000 pieces of rolling stock.

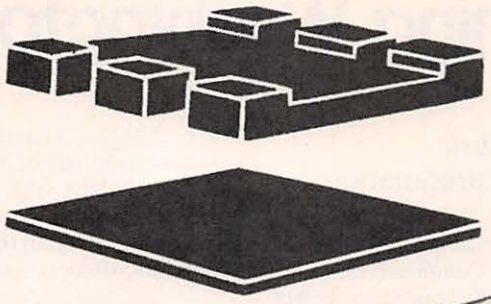
"That business was originally considered entirely separate from car ownership and management, but the lines have blurred and, increasingly, we've become involved in transactions in which we've had the opportunity to combine our capabilities," said Mundell. "In that sense, we aren't undertaking a new business venture so much as we are reformatting and expanding operations that have existed within the company for some time."

Mundell said that of the 1,650 cars now on order, as many as 1,300 could be used in investor programs later this year and in 1980 and 1981. In these programs, cars are sold to individuals through a securities firm, and United States Rail Service, a U.S. leasing subsidiary, manages them. Currently the subsidiary operates about 1,100 cars, of which about 500 are investor-owned.

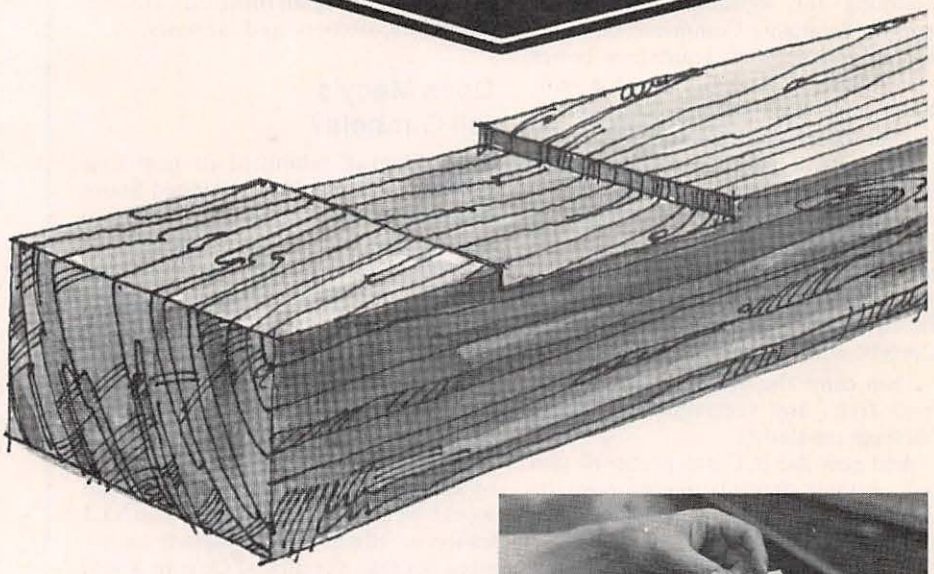
Mundell said the company also expects to lease some of the new cars to industrial companies and to short-line railroads. In one such arrangement earlier this year, the company leased 175 covered hoppers valued at $8 million on a long-term basis and subleased them for shorter period to several chemical manufacturers.

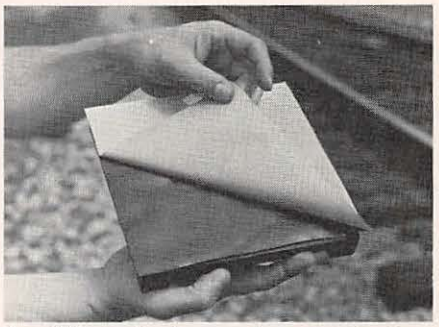
"The emphasis in purchases for our own account and for investors will be hoppers, tank cars and, to a lesser extent, gondolas and other specialized kinds of units," said Mundell. "These are projected to have more consistent patterns of usage over the long term than boxcars."

Koppers Polyethylene Tie Plates

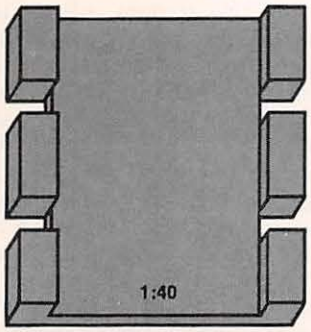


Koppers offers both double-shouldered plates for general use and industrial-grade plates for sidings. Each is made of lightweight, durable, injection molded polyethylene. Tie plates can be put in place in dapped crossties with a specially-developed gap-filling adhesive, designed to reduce tie wear, thereby increasing the life of the crosstie. The combination of polyethylene plates and special adhesive saves money and maintenance on any railroad construction project.





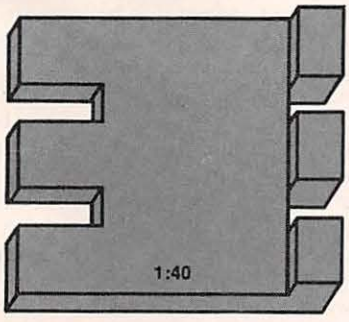
Gap-filling adhesive can be conveniently applied during construction or track maintenance.



Koppers Double-Shouldered Polyethylene Tie Plates

For general usage on main or branch lines of Class 1 railroads.

Sizes	8″ x 8″	7½″ x 7½″
Base Rail Size	6″	5½″
Approx. Weight	1.3 lbs.	1.1 lbs.
#/Ctn.	36	40



Koppers Single-Shouldered Polyethylene Tie Plates

For usage on railroad sidings and industrial track installations.

Size	7½″ x 6½″
Base Rail Size Range	4⅜″ to 5½″
Approx. Weight	.95 lbs.
Tensile Yield Strength	3500 psi
#/Ctn.	48

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Watching Washington

ICC now ponders TOFC/COFC deregulation

For about a year, pressure has been mounting for legislation that would strip the Interstate Commerce Commission of much of its regulatory power over railroads. And for about a year, the ICC has been moving slowly, on its own, to loosen the regulatory reins.

Late in 1978, the ICC reversed a long-standing policy and decided that contract rates were not, after all, unlawful. The commission later demonstrated its good faith when it took only one month (dizzying speed for the ICC) to approve the first such rate, which involved the C&NW and Procter & Gamble.

Then came the decision to free most fresh fruits and vegetables moving by rail from regulation.

And now the ICC has proposed partial or total deregulation of rates involved in the rail portion of TOFC/COFC movements. Said the commission: "Increased use of TOFC/COFC service may contribute to conservation of energy, enhancement of the environment, and more efficient use of transportation resources."

The ICC also proposed faster procedures for licensing motor carriers that want to join in TOFC/COFC operations, and a zone of reasonableness within which motor carriers could raise or lower TOFC/COFC rates.

Interested parties have 60 days from Aug. 20 to comment on the proposals.

Adams and Butchman join Washington law firm

Brock Adams, who resigned as secretary of transportation six weeks ago in a fit of anger and a blaze of publicity (*RA*, July 30, p. 12), has remained at the DOT as a consultant pending Senate confirmation of his successor, Portland (Ore.) Mayor Neil Goldschmidt. That was expected to take place early in September. On Sept. 15, Adams will join the Washington law firm of Houger, Garvey & Schubert as a partner. Joining the same firm is Alan Butchman, former deputy secretary of DOT. It was a White House demand that Adams fire Butchman that helped lead to Adam's own resignation.

While many Washingtonians admired Adams's spunk in standing up to the White House, his departure from DOT was not universally mourned. Amtrak enthusiasts, in particular, were annoyed by what they thought to be Adams's over-zealous promotion of the Administration's plan to shrink the Amtrak network. "While secretary," says one, "Adams went out of his way to knock Amtrak, making such outlandish statements as 'Amtrak is energy inefficient because they drag all those cars around, like diners, sleepers, and *cabooses*.' "

Does Macy's tell Gimbels?

When Conrail submitted its new five-year business plan to the United States Railway Association Aug. 2, it prepared for the news media a brief summary of the plan. This is the practice Conrail has followed with past business plans: It does not release the entire document because, says Conrail, that would give valuable information to competitors.

But this time several of the media wanted to know more than the summary told them. That summary said, among other things, that a deregulated Conrail would be able to get by with the $3.3 billion in federal funding already authorized but that a regulated Conrail would need more (*RA*, Aug. 27, p. 10). The summary also mentioned that Conrail planned to defer some improvements previously announced for 1980-81.

The Journal of Commerce, U.S. News & World Report, Traffic World, Labor, and the *Baltimore Sun* all went to USRA with Freedom of Information Act requests for the full document. USRA did give them more of the document than the summary had contained, but withheld portions at the request of Conrail. *U.S. News & World Report* and *The Journal of Commerce* appealed this decision; the appeal was still under consideration early in September.

The attitude of these publications appeared to be that as long as public money was invested in Conrail, the public had a right to know what Conrail was telling its federal monitor and banker. A USRA spokesman pointed out that Conrail is a private, not a public, corporation, in which the government is an investor.

In a letter to USRA, Conrail Chairman Edward Jordan said he had marked as confidential not only those portions of the plan which could give aid and comfort to competitors, but also "specific financial data, the dissemination of which could generate conclusions on the part of the public which may not prove to be warranted by future events, and which could threaten Conrail's future viability."

Railroads will watch the outcome of the appeal with interest—especially those that may one day need the government as an "investor."

Amtrak cuts six routes

Faced by the inexorable approach of Oct. 1, date of the DOT-mandated route restructuring, along with 30-day railroad and union contract notification provisions and differing House and Senate legislation to save various services and routes, the Amtrak board meeting Aug. 29 accepted a management proposal that would implement service augmentation approved by both houses, drop six long-distance trains, and hang loose as far as possible on matters where House-Senate conference action cannot be predicted.

Trains to be dropped are the Chicago-Miami Floridian, the New York-Kansas City National Limited, the Boston-Catlettsburg, Ky., Hilltopper, the Chicago-Seattle North Coast Hiawatha, the Chicago-Houston Lone Star, and the Oakland-Bakersfield San Joaquin. (It is considered likely that California will appropriate money to save the San Joaquin, under the 403(b) provision of the legislation that created Amtrak.)

It had been anticipated that one of three New York-Florida trains would be eliminated; the Amtrak board instead decided to combine the Meteor and Champion between New York and Jacksonville. At Jacksonville the train will divide into two sections, one going to Tampa/St. Petersburg and one to Miami.

In limbo are the Washington-Chicago Cardinal, for which provision was made in the Senate bill only, and the Washington-Cincinnati Shenandoah, for which provision was made only by the House.

Long-distance trains to be continued in operation by virtue of projected fiscal year 1980 ridership meeting the congressional criteria (150 passengers per train mile, and a short-term avoidable loss of no more than 7 cents per passenger mile) are the Washington-New Orleans Crescent and the Washington-Montreal Montrealer. The Crescent is to be converted to head-end power, and reduced operating charges have been negotiated with the Canadian National for the Montrealer.

Short-distance trains that have been saved by meeting criteria of 80 passengers per train mile and a loss of no more than 9 cents per passenger mile are the Seattle-Portland Mount Rainier and the Vancouver-Seattle Pacific International, which are to be combined as a through run southbound.

Trains that will be continued in operation under the "regional balance" provision of the pending legislation are the Salt Lake City-Seattle Pioneer and the Chicago-Laredo Interamerican.

Another train that was on DOT's original list of those to be eliminated but which has been retained is the Chicago-Los Angeles Southwest Limited.

The routes to be eliminated add up to around 5,000 miles.

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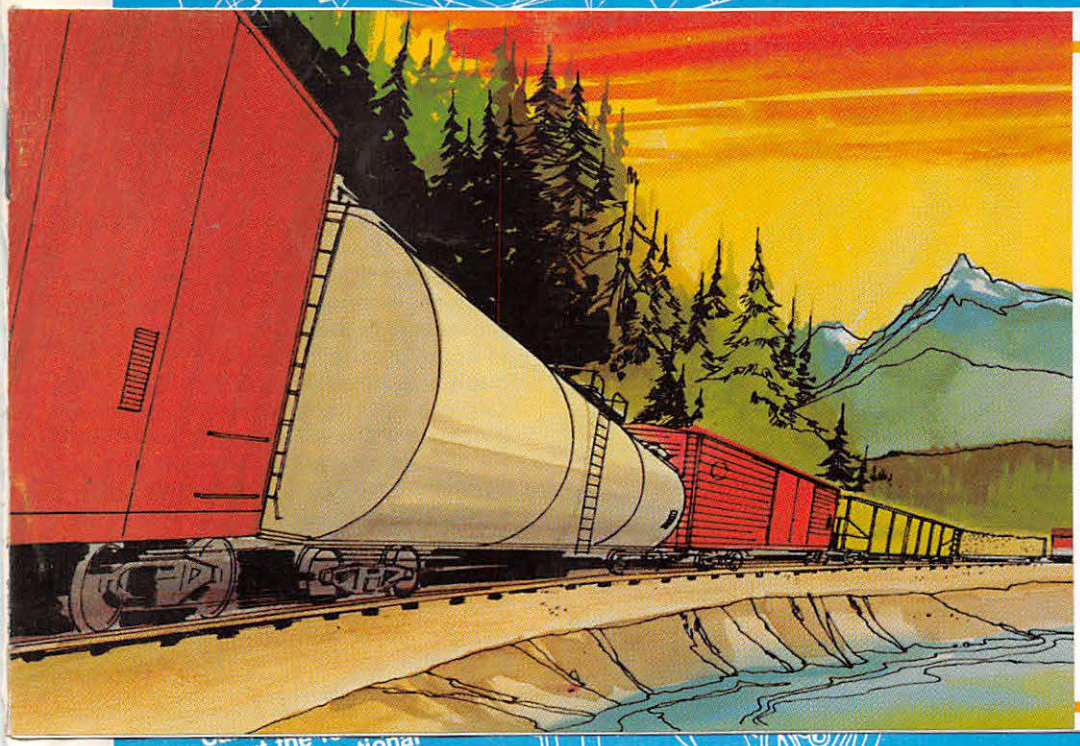

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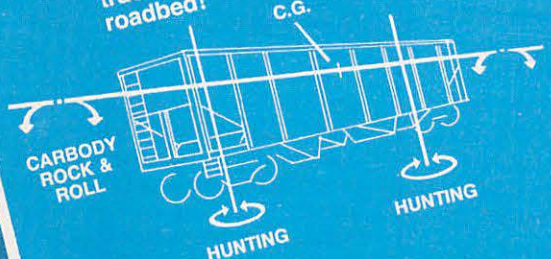

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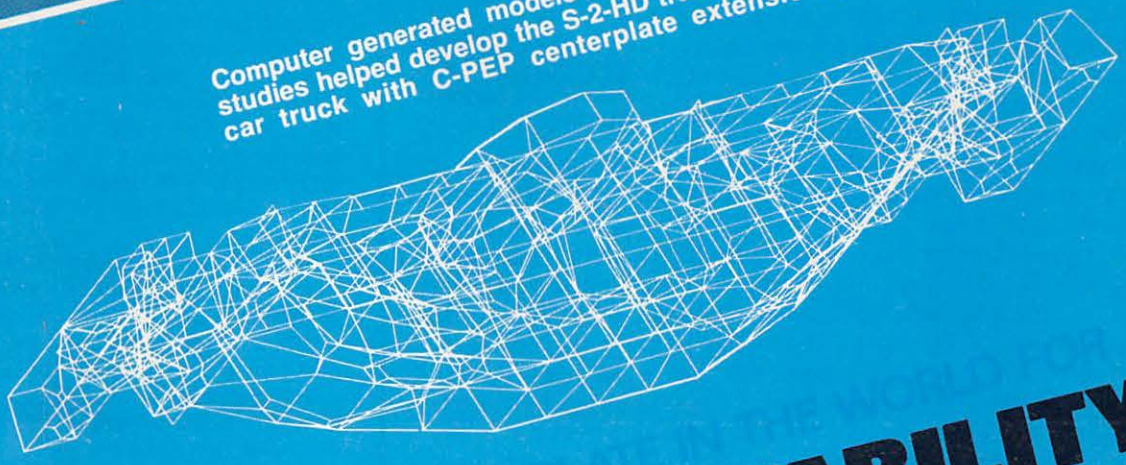

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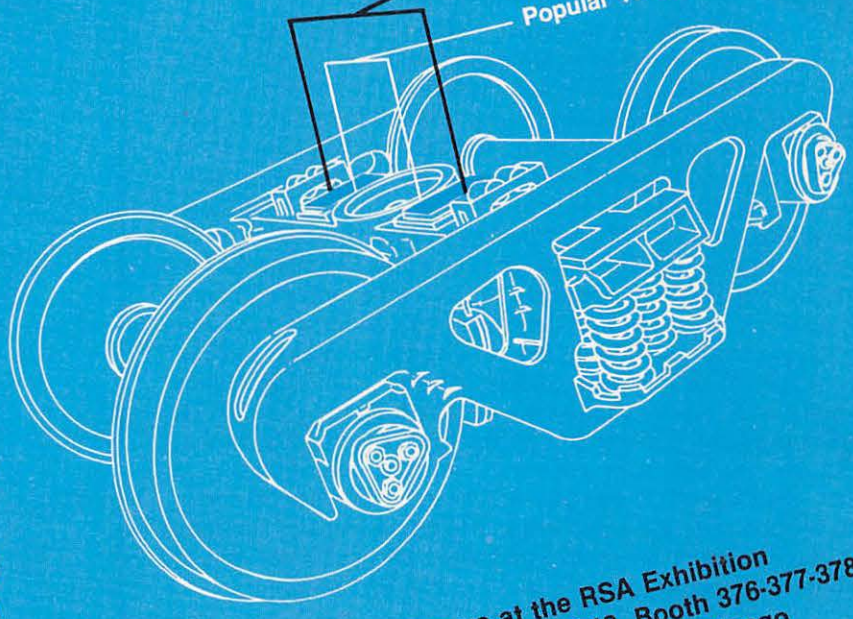

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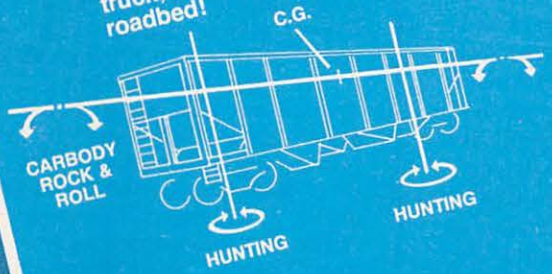

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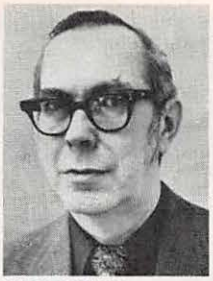
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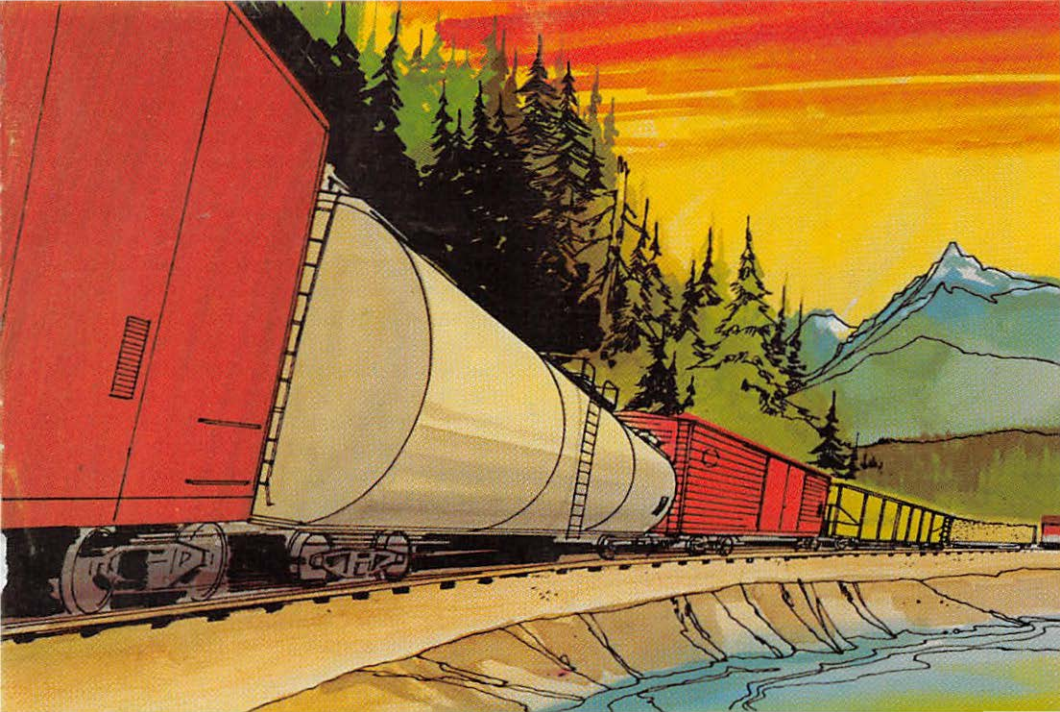

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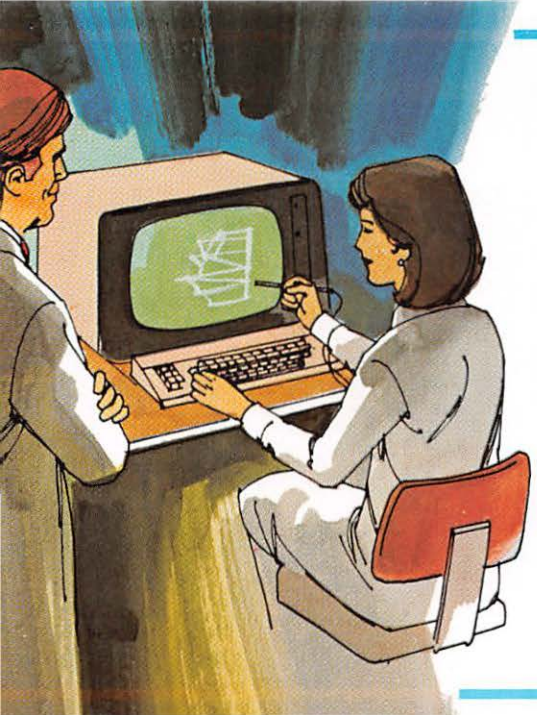

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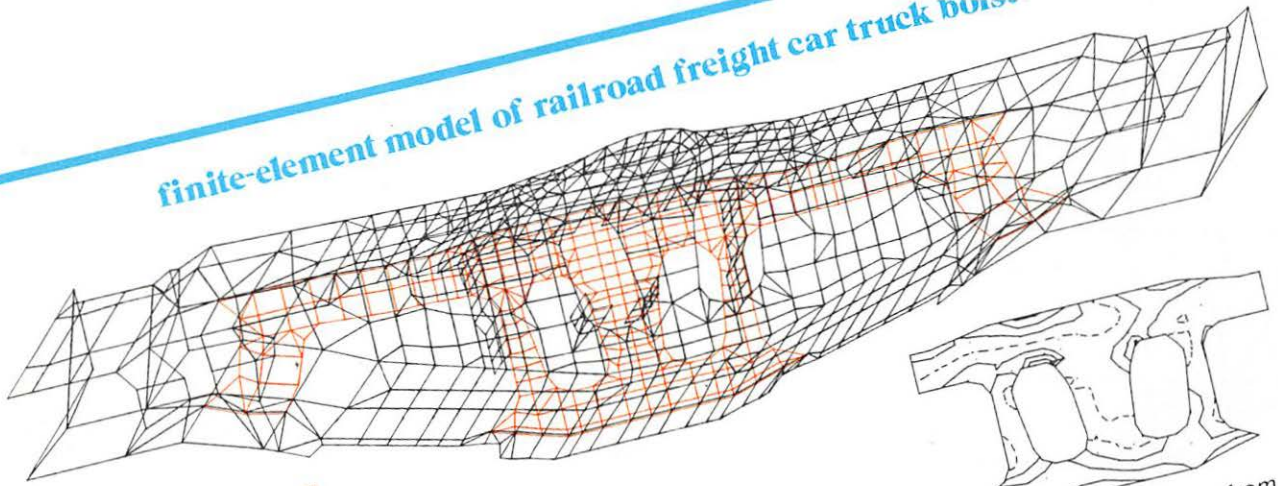

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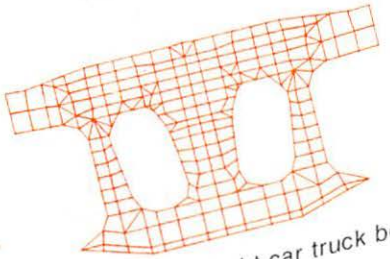

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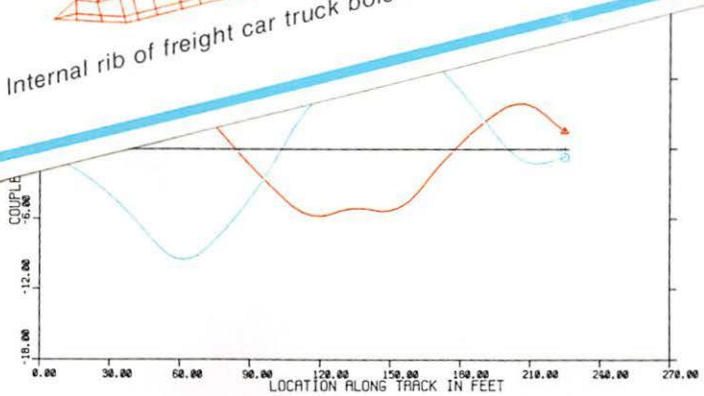

Determination of crossover negotiability

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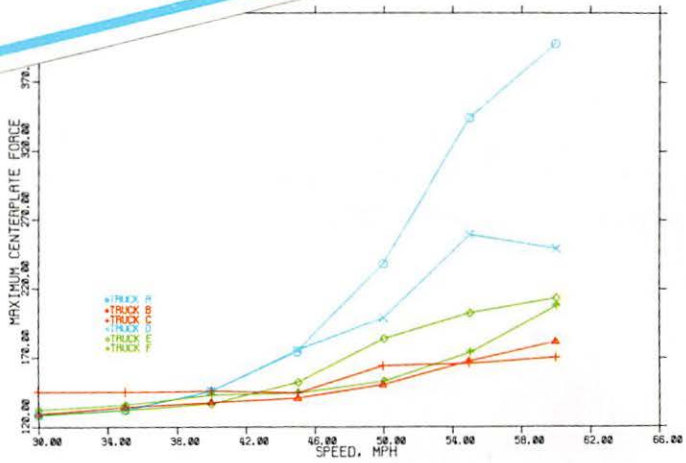

Parametric study using flexible body vehicle model program

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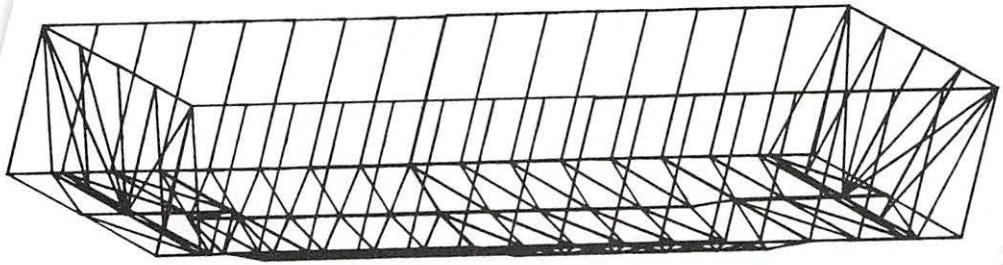

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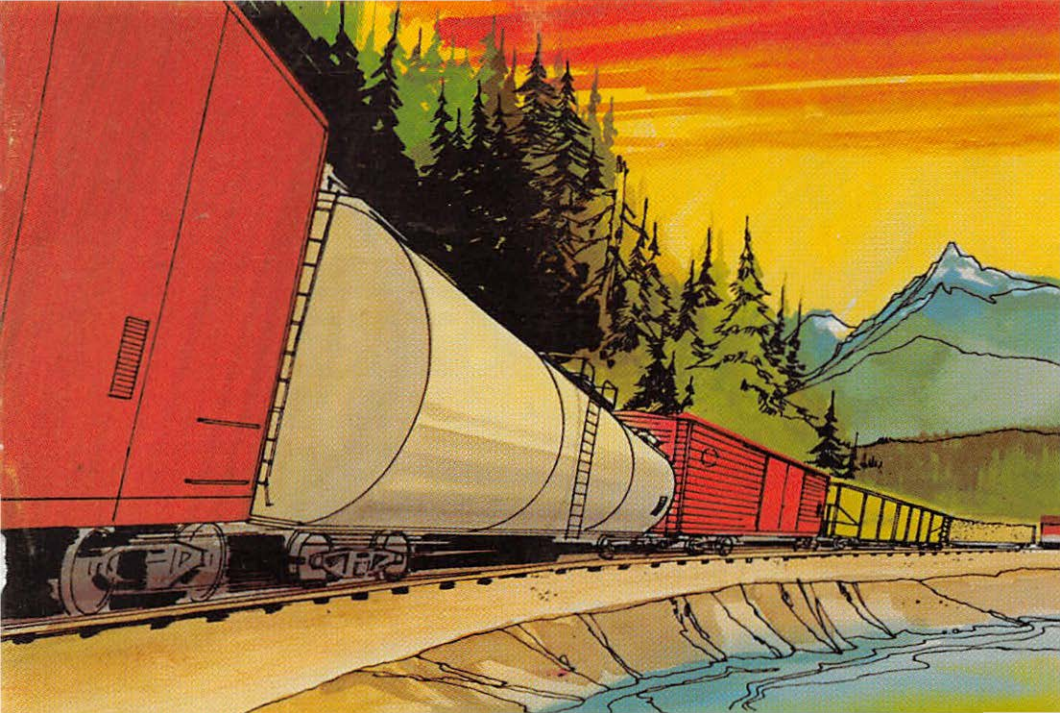

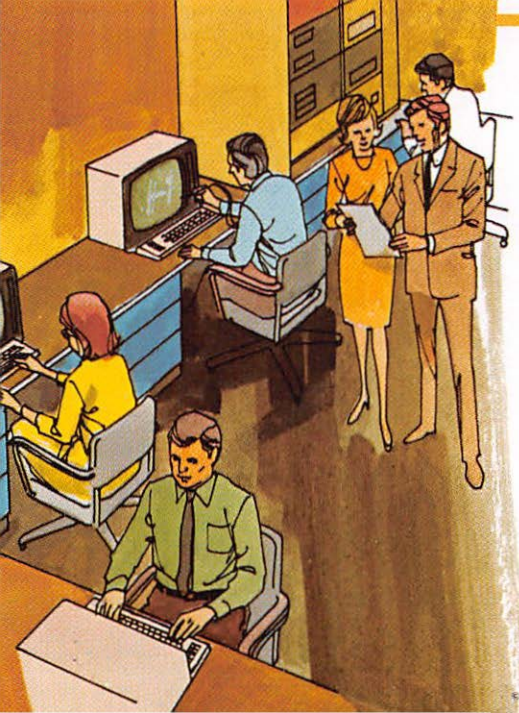

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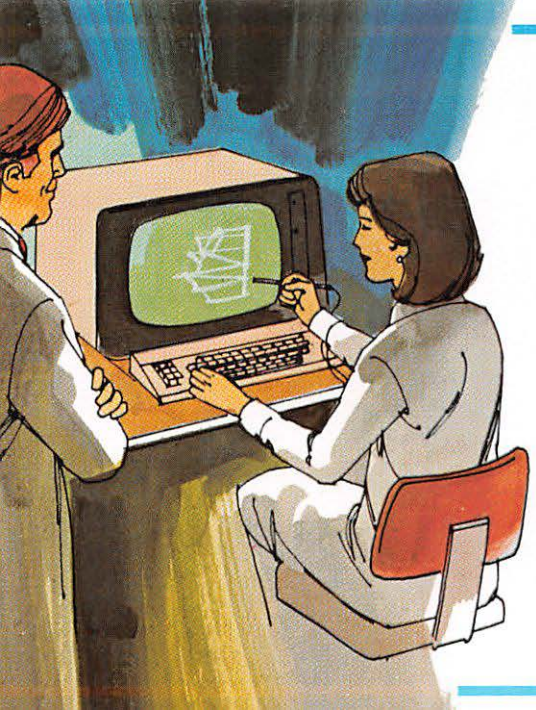

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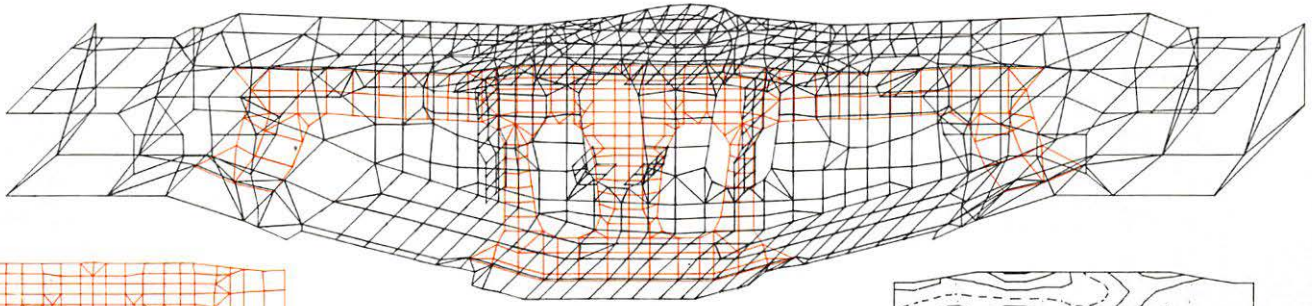

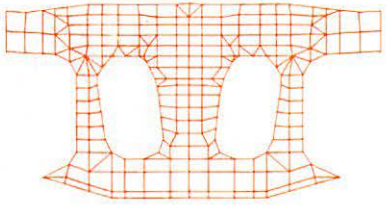

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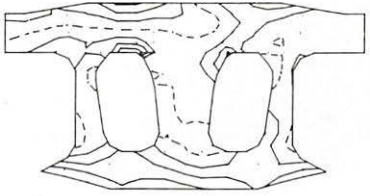

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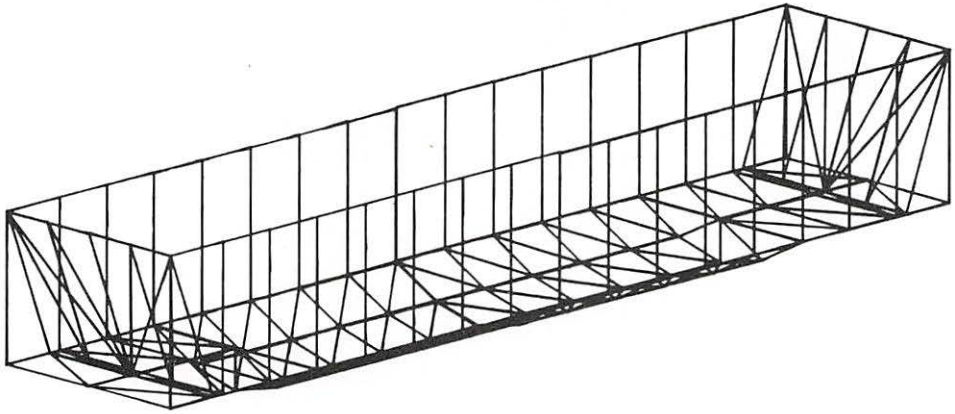

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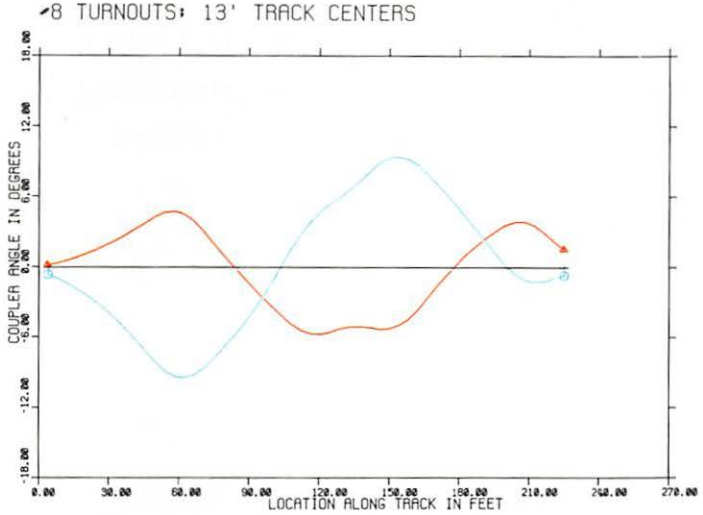
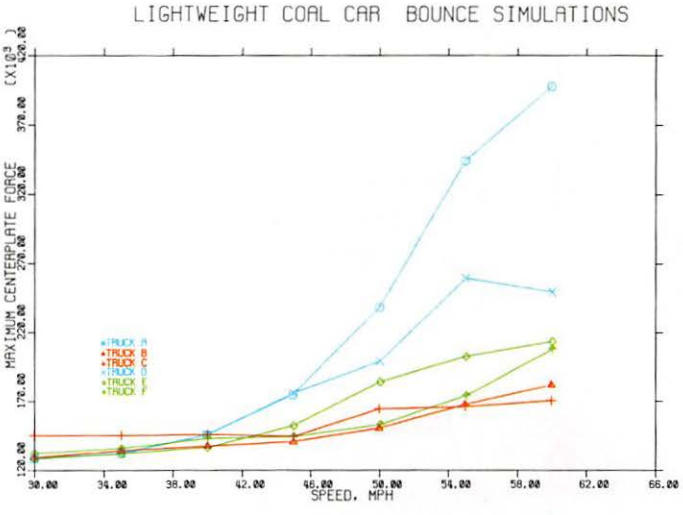


Determination of crossover negotiability



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Clinchfield clears a derailment...fast

Based on a news article from the March 8, 1976 issue of Railway Age

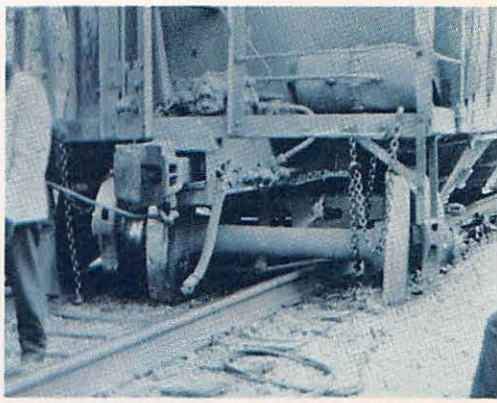
It is 9:45 a.m. when the radio crackles in the chief dispatcher's office at Erwin. Time freight 95 has a car off at mile post 168.5. It's a covered hopper loaded with 80,000 pounds of phosphate at a remote location on a ledge between a mountain and the Toe River, 35 miles to the south.

At 10:06 a.m. a Chevrolet truck equipped with Hy-Rail and a National crane is dispatched to the scene with an M. of E. crew and a Hoesch rerailing system.

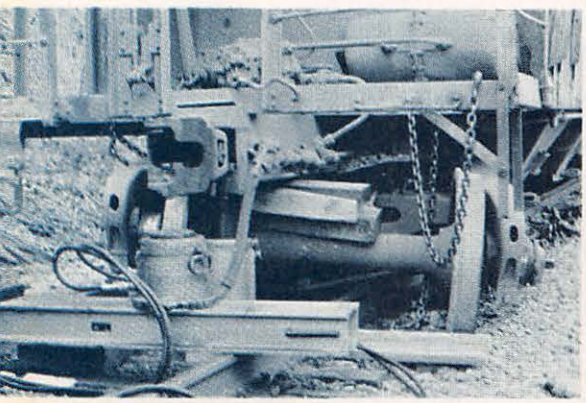
How the Clinchfield cleared its busy main line fast and efficiently is shown in the photo sequence below. In addition to the time savings, Executive Vice President and General Manager T. D. Moore, Jr., points out that this method of rerailing "involves only a very small fraction of the old manner in which we would have required a wreck train."

10:56 a.m.—Crane truck is jockeyed from nearest road crossing, 1-1/2 miles from derailment, to main track for Hy-Rail operation.

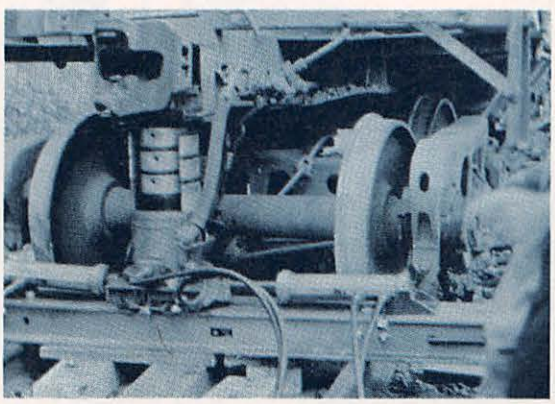
11:02 a.m.—Crane truck, moving backwards in order to be positioned against derailed car, moves to derailment site.



11:08 a.m.—At arrival, crew finds heavily loaded car with forward truck at near right angles to rail.



11:37 a.m.—Hoesch hydraulic rerailer is positioned under coupler, with lines connected to compressor on crane truck.



11:52 a.m.—Hydraulic jack has raised truck clear of railhead and moved it laterally, positioning wheels for rerailment.

12:16 p.m.—#95 is rolling at restricted speed with cripple in tow to be set out at first side track.

For complete information about Hoesch hydraulic rerailment equipment, call or write—

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Please see our indoor exhibit 408-411 and our outdoor track exhibit D-52.

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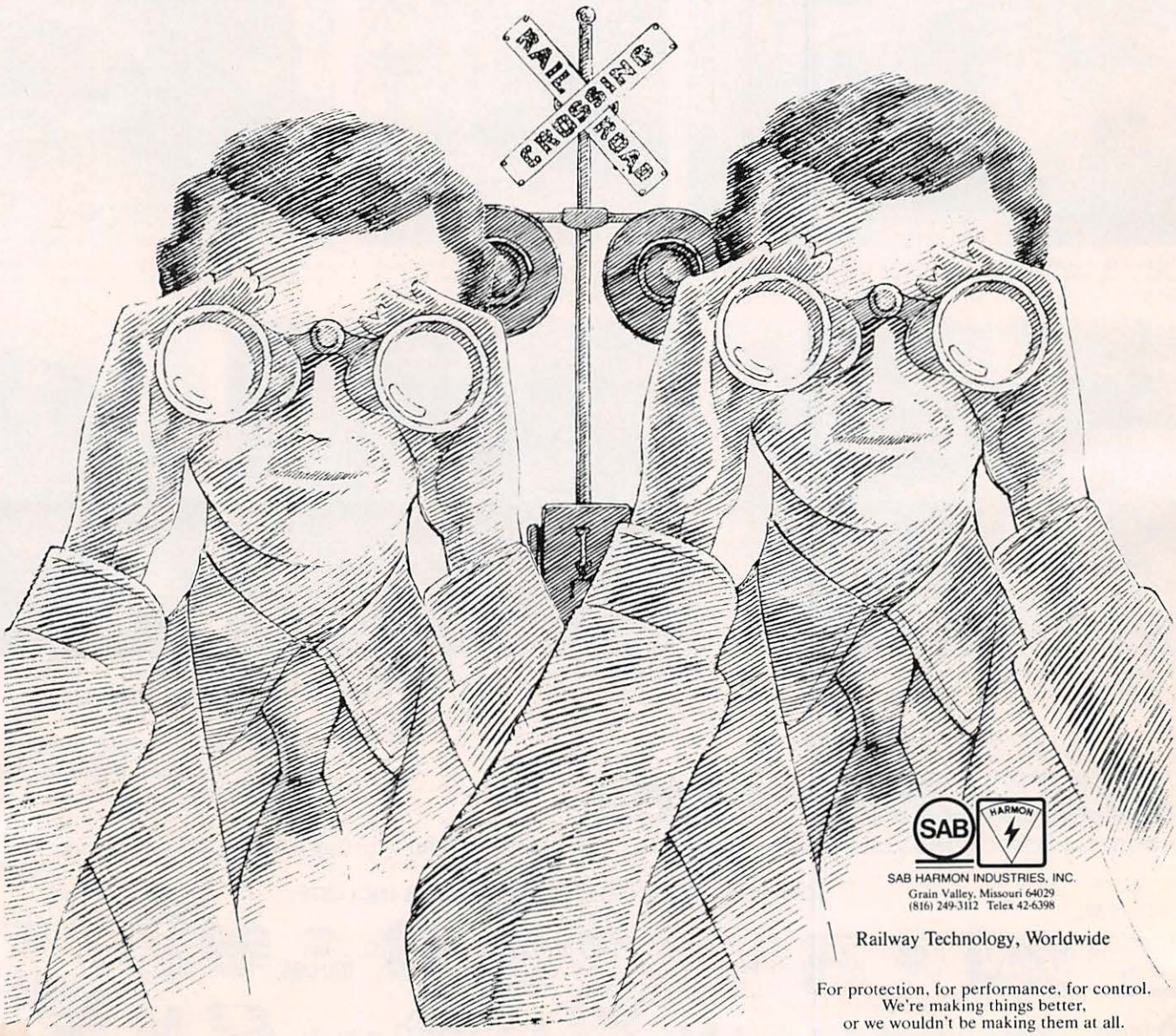

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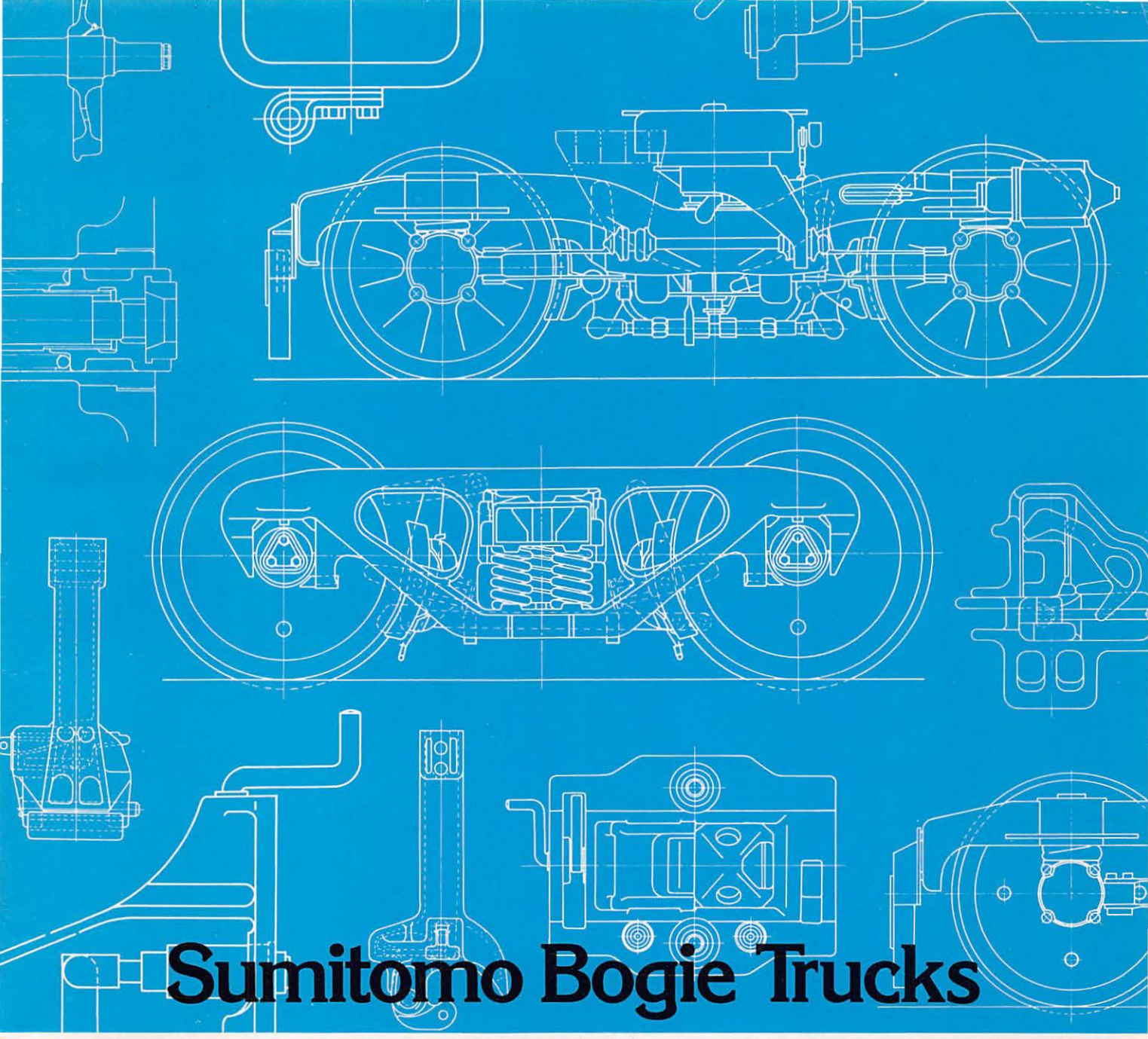

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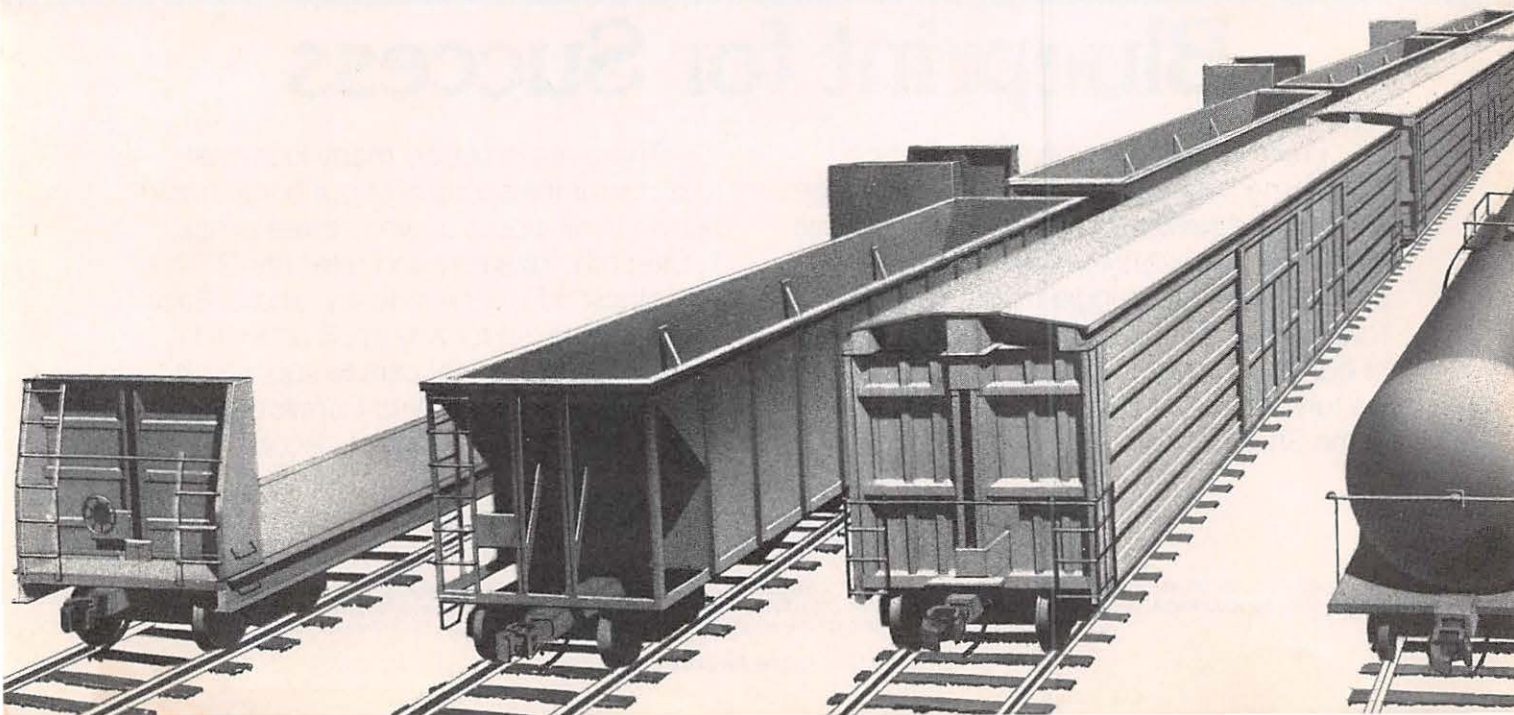

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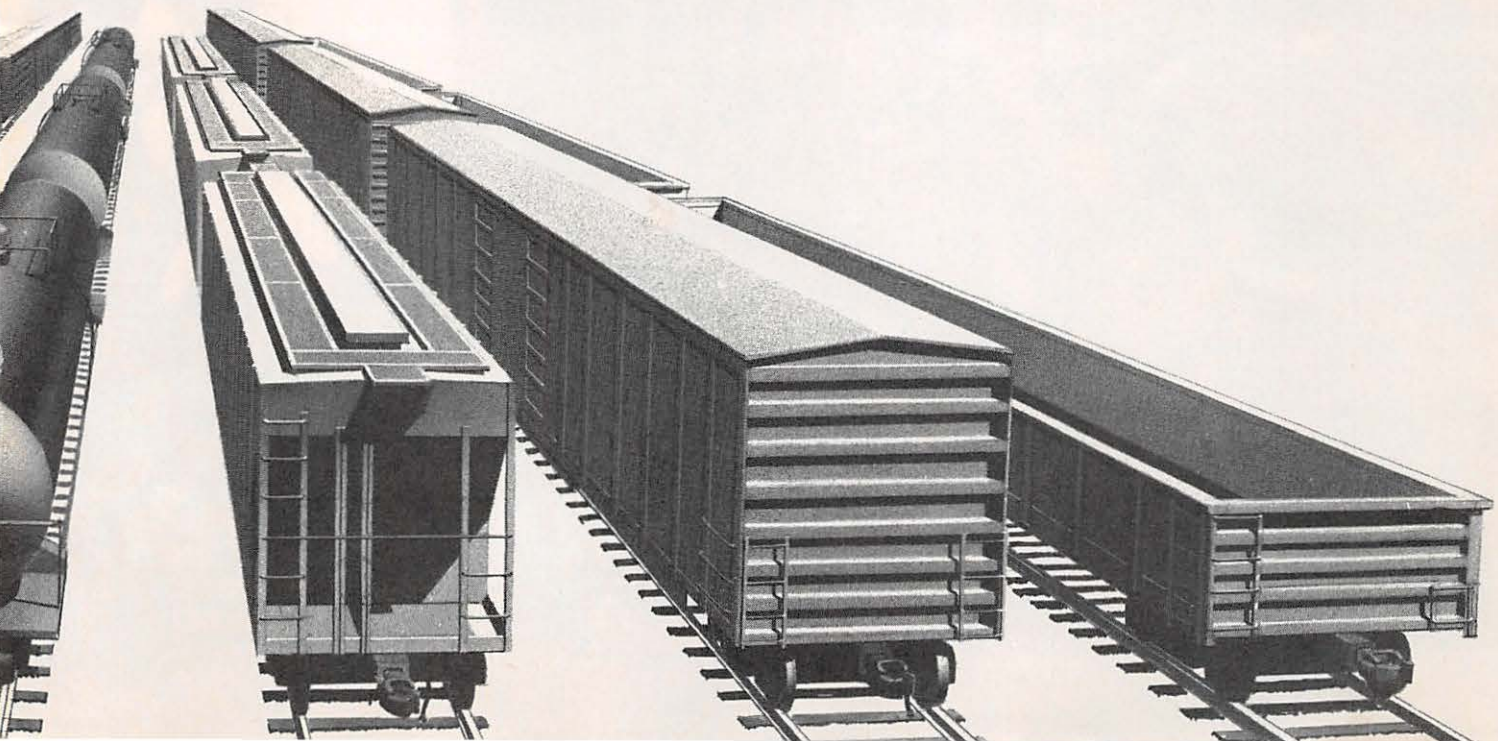

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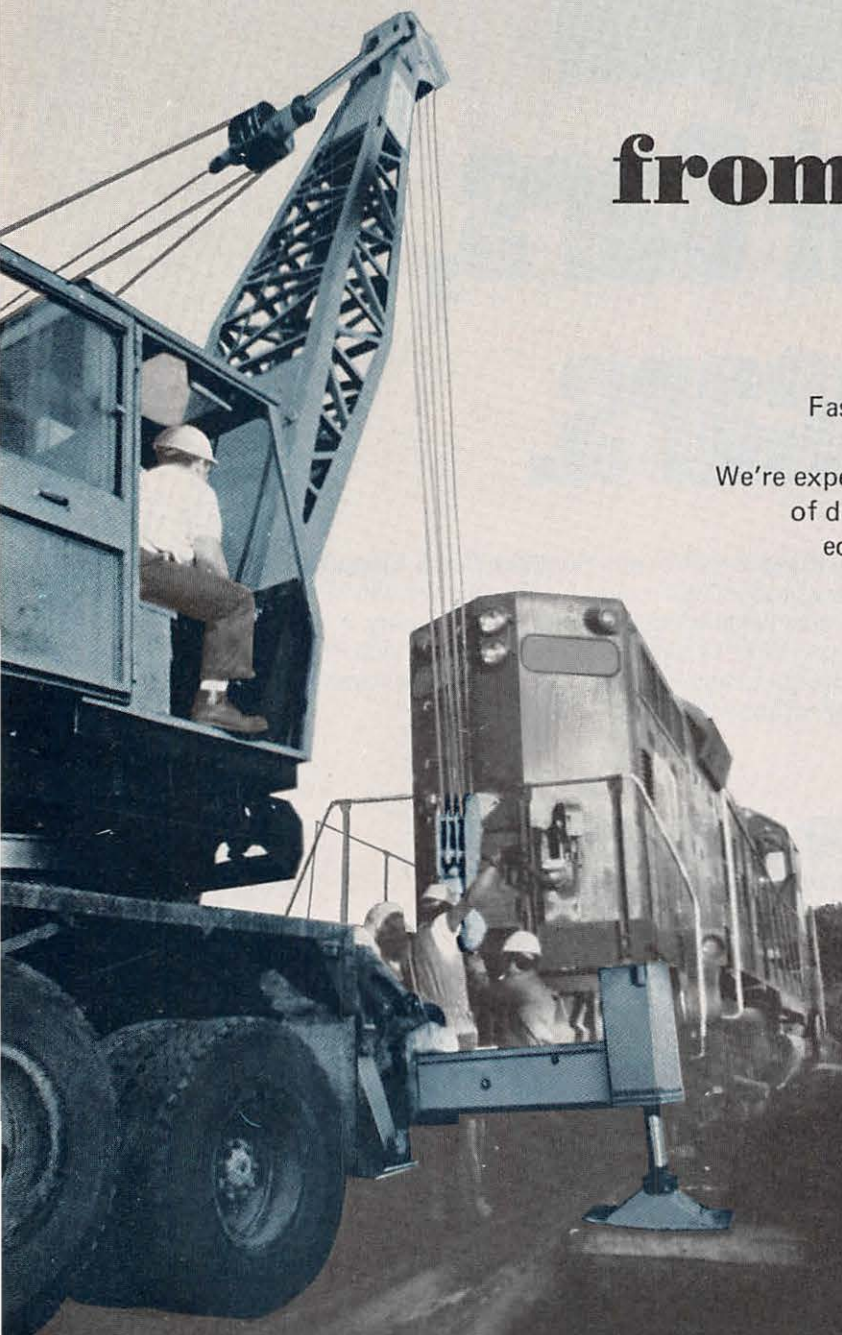

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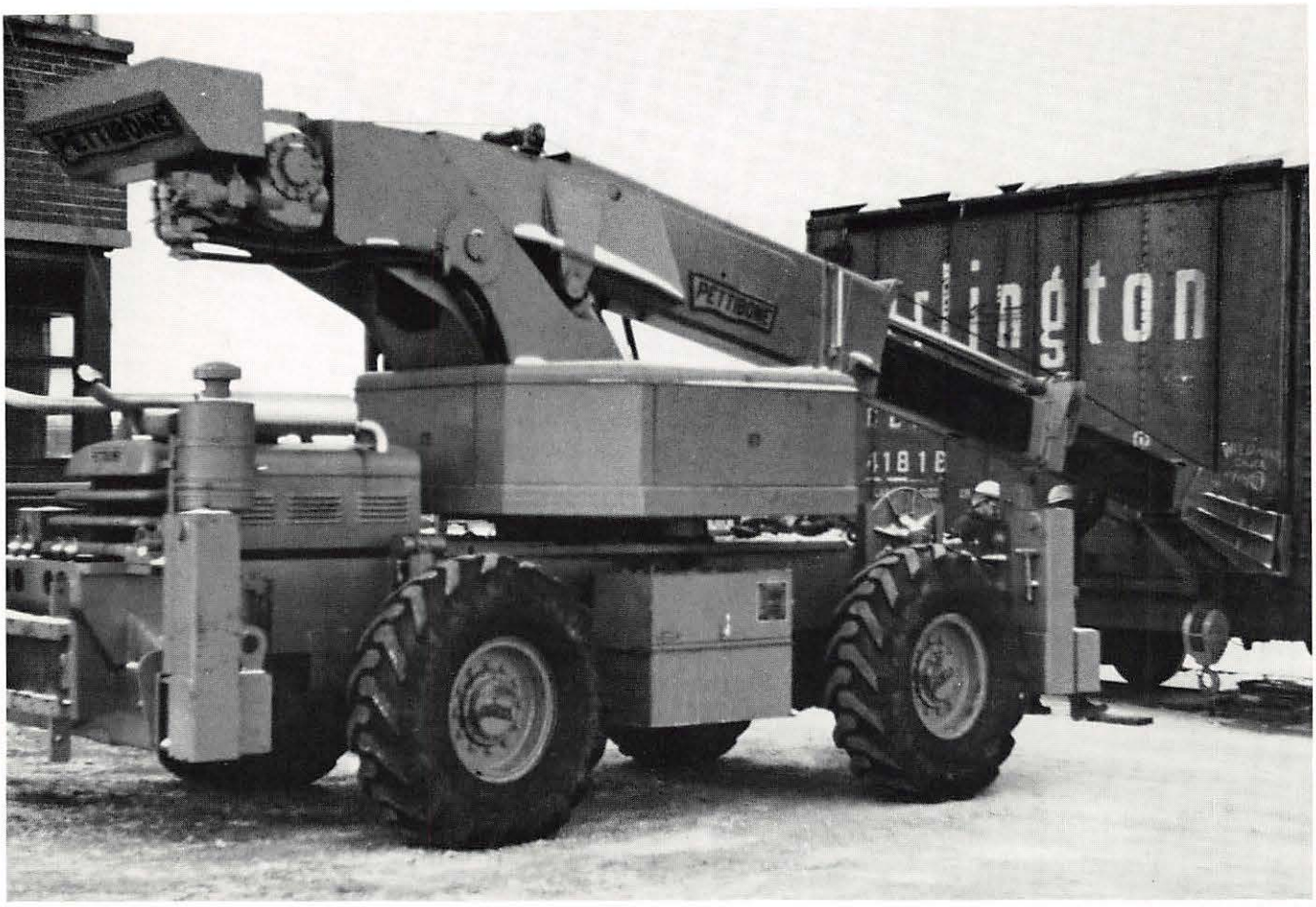

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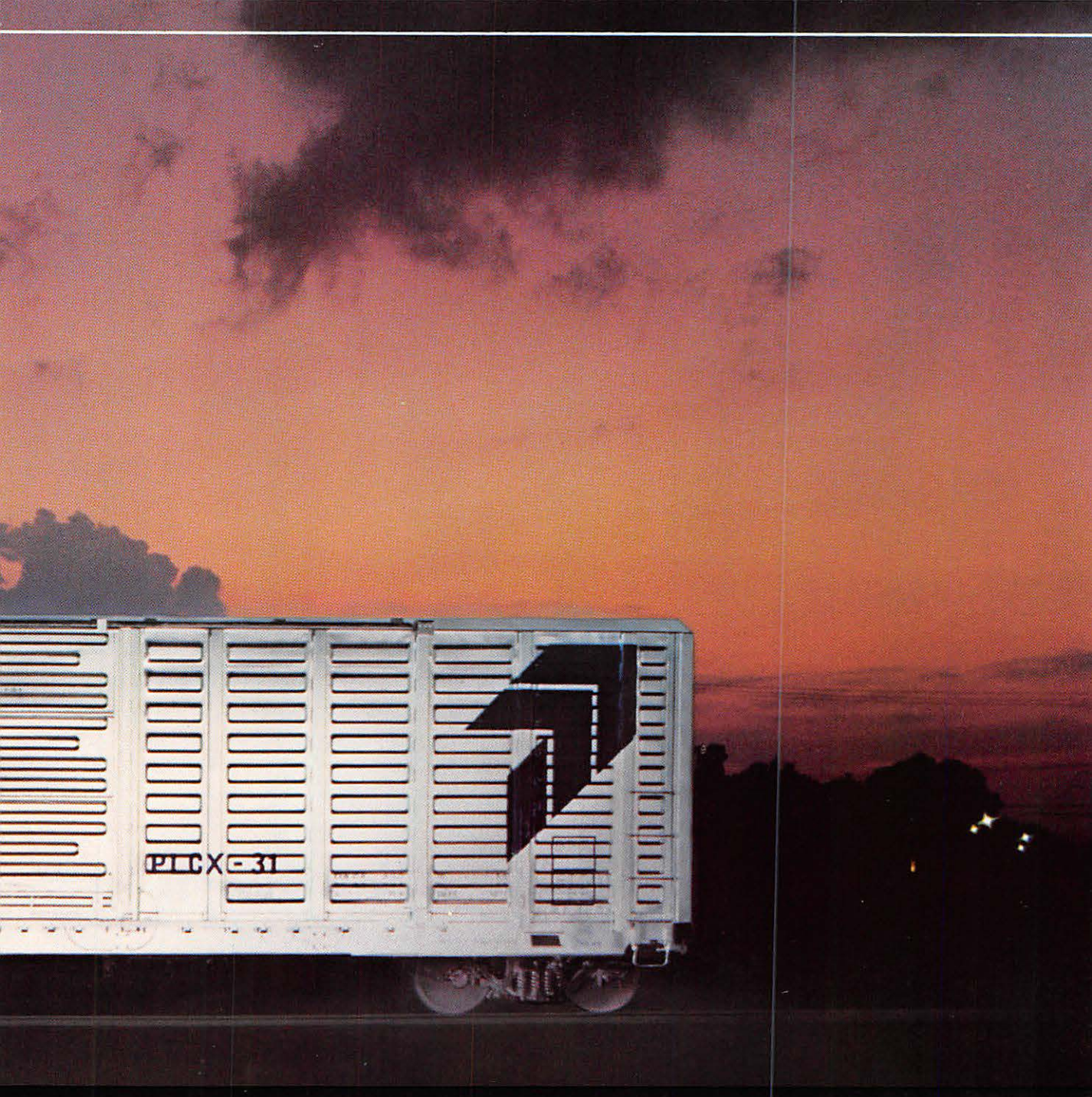

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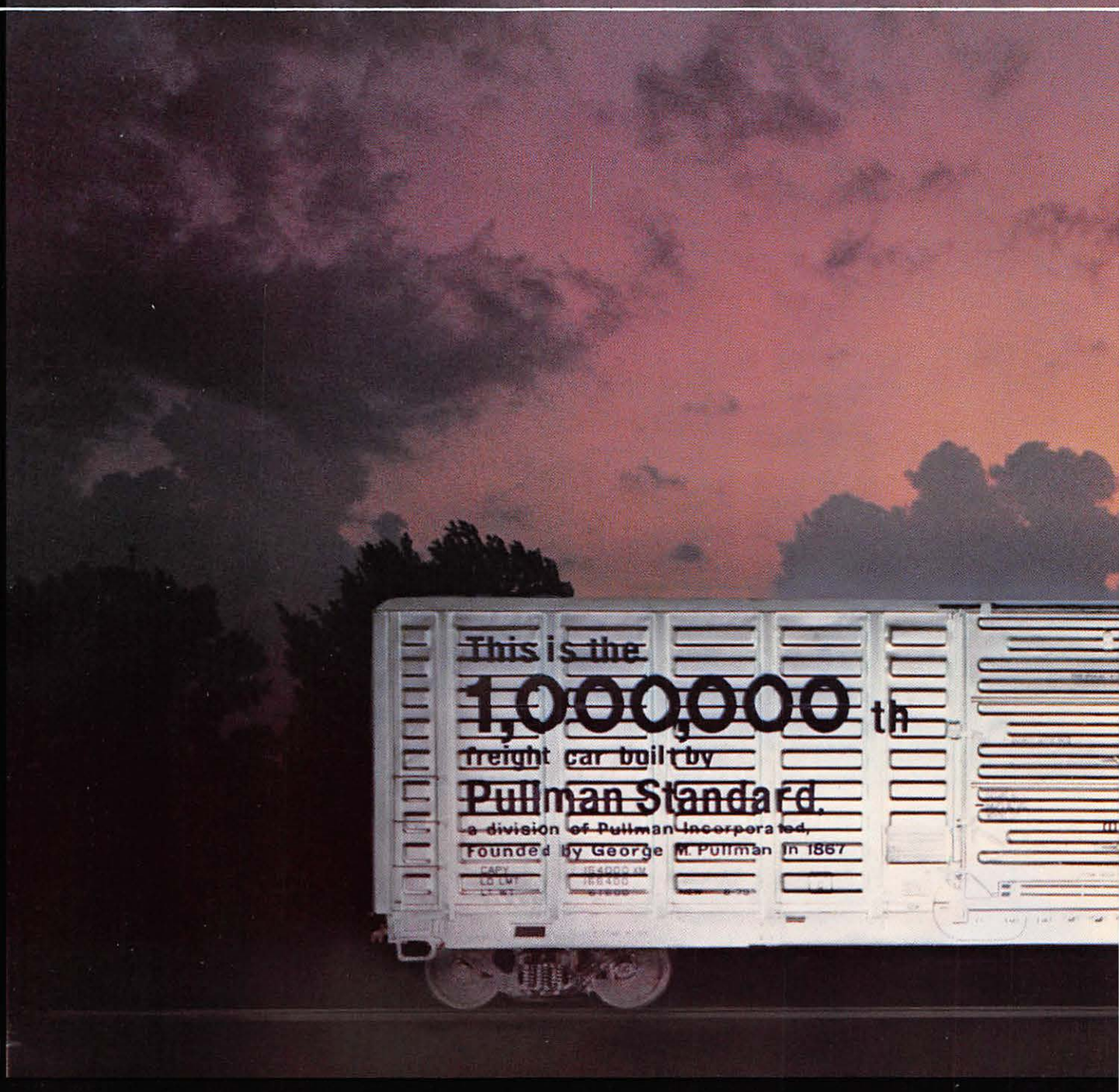
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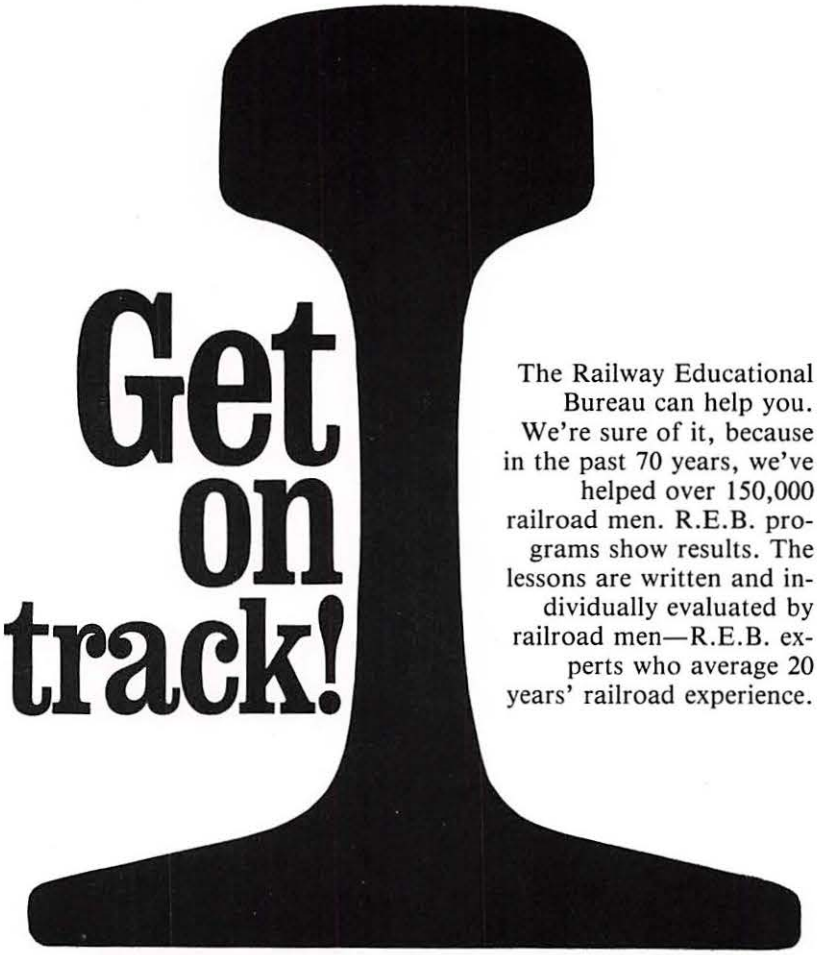

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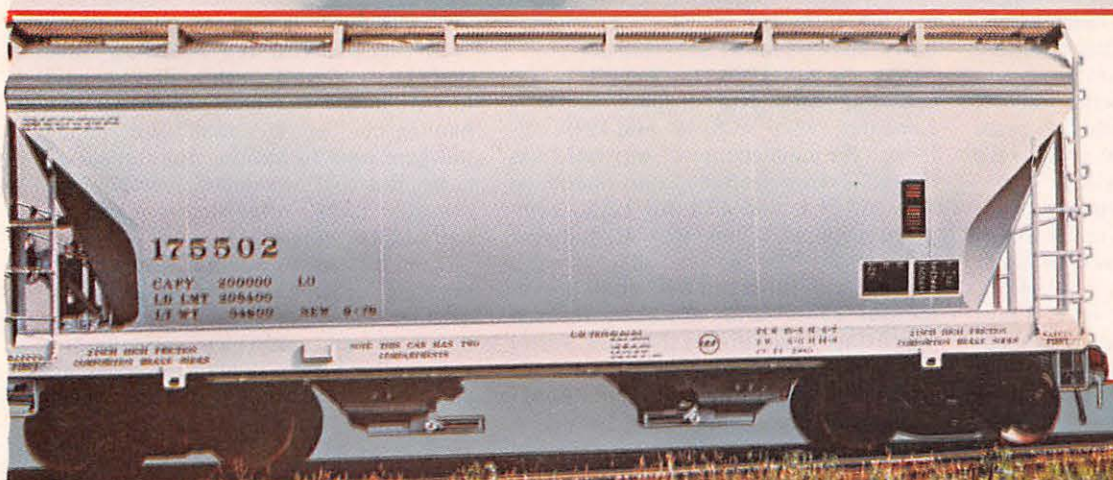
Center sill-less design allows cement to unload rapidly from the CF 2700.

Silica sand flows freely from the CF 2980.

The two-hopper ACF Center Flow® car, optimized for a broad range of heavy ladings.



By comparison, the big CF 5701 (for low density ladings) would size-out to here →

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The great railroads

Family Lines gets its act together —and the bottom line shows it

By FRANK MALONE
Associate Editor

Find your strengths and weed out your weaknesses has long been a strategy of well-managed companies—except, it seems, of many railroads, whose over-regulated weaknesses have tended to outweigh their inherent transport strengths. These days, however, railroads seem to be following that strategy more actively than ever, and one example is the Family Lines —of which it might be said that Seaboard Coast Line is the strength and Louisville & Nashville is the weakness.

It *might* be said, because L&N recently has seemed to produce a disproportionate share of Family Lines' problems. But the problems have been related largely to L&N's mammoth commodity, coal, and they're the kind most aggressive companies would like to have, because they're indicative of a basic strength that could, in a short time, show somé significant results for the Family Lines' bottom line.

Overcoming the revenue- and operations-related weaknesses of L&N's biggest commodity is part of a Family Lines strategy that is shaping up to capitalize on Seaboard's well-mixed commodity bag as well. Pieces of the approach range from a new "modularized" marketing plan to a well-funded plant improvement program, with tighter operating practices in the middle. The pieces are falling into place as the basis of expectations as great as the Family Lines' inherent strengths.

● **ROI improvement foreseen.** The first and major expectation is for a bottom line improvement. "That's just what our five-year plan projects, even with a continually increasing asset base," says A. Paul Funkhouser, president of Seaboard Coast Line Industries, to whose revenues the 16,000-mile Family Lines system contributes more than 96%. The rest comes from data processing and publishing subsidiaries. Family Lines revenues come from four 100%-owned SCLI subsidiary railroads: SCL (the only directly owned road), L&N, Clinchfield, and Georgia.

Return on investment for Family Lines is currently 5%-6%, Funkhouser says, respectable as rail ROI goes these days, rather impressive in view of L&N's first-half deficit of $1 million, after a first-quarter loss of $11 million and a full-1978 loss of $32 million.

These figures show why L&N occupies a major place in the Family Lines strategy, but there's more: 1978 SCLI net income was severely reduced by nonrecurring costs that exceeded the amount of decline in net income, and more than half of those costs were caused by L&N-related problems. There was an estimated $5.9-million impact from the coal miners' strike and a $13.9-million outlay to replace high carbon wheels following the tragic Waverly, Tenn., tank car explosion two days after an L&N derailment caused by a broken wheel made of high carbon steel.

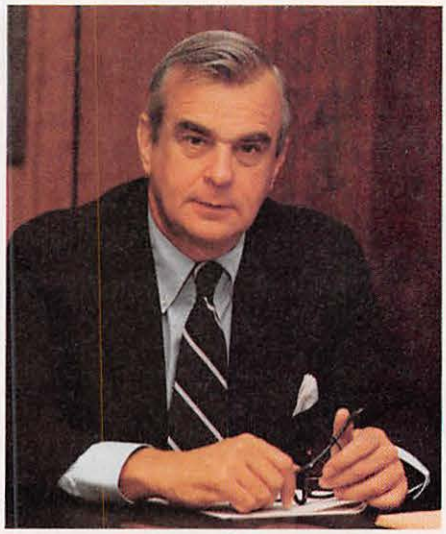
Then there was the Clerks' strike, felt by all roads; it cost Family Lines about $16.3 million in lost revenues and service interruption insurance premiums. Result of it all was that on record 1978 revenues of $1.9 billion, SCLI net income totalled only $67.7 million, compared with $102.4 million for 1977 on revenues of $1.6 billion.

For first-half 1979, however, improvement was evident: SCLI reported net income of $56.5 million on total revenues of $1,054,925,000, of which transportation accounted for $1,016,832,000.

Also by mid-1979, the Family Lines' operating ratio had dropped to 92.7, compared with 93.8 in mid-1978, although the maintenance-of-way ratio was rising. Transportation ratios stood at 41.1 for SCL and 45.1 for L&N, compared with 41.7 and 46.4 at mid-year 1978.

● **The big thrust: L&N coal movements.** Those ratios are likely to keep improving, especially on the L&N, where a most serious weakness indeed has been recognized and is being remedied. Funkhouser says that demand for L&N coal transportation has at times far exceeded the railroad's capacity. He adds that by 1983, according to projections, demand will be 90 million tons a year, compared with about 60 million originated in the highest year so far. About seven million tons will originate on the Clinchfield, but L&N will have the big job, and if all goes well, L&N will be ready.

That "all" includes rate increases that will raise revenues to just a fraction over fully allocated cost and will allow some desperately needed track and equipment improvements. For years, L&N had been hauling coal at rates that were coming nowhere near to meeting fully allocated costs. But coal accounts for nearly *two-thirds* of L&N's originated tonnage and half of total tonnage.



"Our challenge is to get the L&N in shape to meet a broadened national energy crisis."

A. Paul Funkhouser, President
Seaboard Coast Line Industries

To make matters worse, a gigantic market shift forced L&N to haul most of its originated coal in exactly the opposite direction from that which originally prevailed after L&N was built to serve markets basically in the Great Lakes areas. Until late 1978, L&N was hauling coal at an average $3.57 a ton, compared with average rates 70% higher for Norfolk & Western and 31% higher for Chessie. At the same time, because of utility growth in the Southeast, L&N's coal business grew 60% in 1967-77, while the two other big coal haulers had a 20% decrease, and more and more of that coal had to be moved over the Appalachians on a single-track L&N route that simply couldn't

Serving 38 ports—more than any other railroad—Family Lines seeks to help its shippers expand into export markets.

handle such volumes (Great Lakes markets are served via a flat double-track route).

The low rates resulted from L&N's original service area, Northern utilities that tried to keep their own rates low to compete with oil- and nuclear-powered plants, and the rates stayed low long after costs of the other fuels had risen sharply. Because their markets were more metallurgical and export, C&O and NW had not faced the same competitive problems.

"If you took our tonnage and applied the NW's rates," Funkhouser says, "we would have been generating internally another $150 million."

No wonder, then, that L&N went to the Interstate Commerce Commission in September 1978 and asked for a 22% coal rate increase, on top of the 13% increase being sought for coal by the railroad industry generally. The ICC allowed the 22% to take effect, subject to investigation, Oct. 30. ICC then allowed a further 5.5% increase on L&N-originated coal (though it allowed the full 13% on coal originating elsewhere in the South) and said it would consider the remaining 7.5%.

"Our position was that if we were permitted everything we asked for on coal, our rates would be only slightly above our fully allocated costs, including our cost of capital of 12.5%, well within the zone of reasonableness," Funkhouser says. "Moreover, a carrier that is not permitted to cover its fully allocated costs on nearly two-thirds of its originated traffic is bound to be in trouble." Nevertheless, the railroad also said that if the full increase was granted, it would launch a $427-million capital and maintenance program related solely to coal movement —as part of a $3.4-billion capital and maintenance program for the 1979-83 period on L&N in general.

The coal rate case had virtually do-or-die significance, in Funkhouser's view: "Unless we are permitted to respond to the laws of supply and demand in our pricing and thus maintain our plant and upgrade it, the only other alternative is for the government to do it. We think the coal case was really a fight for the private enterprise system.

"Our challenge is to get the L&N in shape to meet a broader national energy crisis. From the standpoint of leverage for our own railroad system, this is something unique. The growth potential is almost explosive."

● **More than coal.** While accounting for nearly two-thirds of L&N-originated loadings, coal currently accounts for about 19% of overall Family Lines revenues, more than any other single commodity. It is, and will remain, so important that in the new "modularized" marketing approach, coal is considered the "super module" and still is handled from L&N headquarters at Louisville, though other commodity groups are being centralized at SCLI's Jacksonville headquarters.

Formation of commodity-oriented modules started in early 1977, followed by a name change, from Traffic to Sales and Marketing department, about a year

ago. The change included abolition of the pricing department. Pricing people became part of each commodity module, along with a marketing manager, research personnel, and a sales force. There are modules for nearly all of Family Lines' major or potentially major commodities, which comprise one of the best-mixed traffic bases of any U.S. railroad.

Emphasizing that the traffic-to-marketing conversion is still under way, Welborn E. Alexander, SCLI senior vice president-sales and marketing, says: "We're trying to do it in a time frame suitable for our people. Mainly through attrition, previous competition between Family Lines members is disappearing.

"The goal of the modules is absolute clarity about responsibility. That means accountability, clarity of purpose and priorities, and a greater emphasis on planning for each commodity. Our commodity strategies are really the gut issue. The facts are that we can no longer be all things to all people, and planning is really becoming a way of life for us. We've had to segment our market and redefine our priorities according to the 'asset management' theme. We have big fleets that must be better used, but changing that goes well beyond car utilization to basic questions of *how* we are going to use the fleet in the first place."

● **Loaded backhaul.** Late last year, Family Lines started running the first unit train in the U.S. to haul a different commodity in each direction, and one of the few ever to have a loaded backhaul. (*RA*, May 28, p. 38). The train hauls export corn and soybeans from The Andersons grain terminal at Delphi, Ind., to the ports of Pascagoula, Miss., and Savannah, Ga. From there it moves to the phosphate-rich Bone valley in central Florida for loads of phosphate chemicals destined to Maumee, Ohio. Turnaround is 15 days and will eventually be even better.

The Andersons in July announced a $2.5-million expansion for a new fertilizer plant right at Delphi, and a second train is likely to be added. "It's an amazingly profitable train," Alexander says. "The economies of a two-way movement like that are just incredible." And for the customer, the benefits are just as great. The Andersons saw the competitive aspects of a tighter system and the possibility of building their own merchandising system for phosphate chemicals. The cars are shipper owned. The new fertilizer plant should be in operation early next year and one result of the tightened rail haul will likely be a drop in fertilizer costs for Anderson customers.

Alexander says his "modulists" are confronting some formidable rate structures: "We've let a system of rates grow up, at least for some commodities, that really has constrained our market base. We're totally sold on the backhaul concept, and though the effort is largely to improve rates in general, we're no longer fearful of publishing a depressed rate to load a backhaul. If you look at the trucking industry, it makes you wonder why the railroads have been so tardy."

● **Another success story.** Another objective of Alexander's program is to secure profitable volumes of commodities that are losers in single-car movements. A classic railroad example has been aggregates, but Seaboard earlier this year bought 300 100-ton hopper cars just for hauling stone, its first such purchase ever. Marketing strategies have resulted in relatively short but intensive use of such equipment, mainly in Florida, so that hopper cars are now averaging 2.7 trips a month, compared with 1.6 in late 1978, and three trips a month seems within reach, Alexander says.

Strategists are also looking at piggyback, especially as part of the backhaul emphasis. Seaboard delivers a lot more piggyback loads in the Southeast than it originates, so the challenge is a big one. One way it is being met is exemplified by a new backhaul of peanuts for Derby Foods to Chicago. The intermodal potential is one reason Seaboard has been one of the major experimenters with technological changes such as the RoadRailer (*RA*, July 30, p. 82). "The economics could be quite good if we can get a balance of traffic," Alexander says.

The fuel crunch, he adds, has brought a flurry of "unusual inquiries even from shippers who are just totally truck oriented."

● **Helping customers expand markets.** Regardless of the commodity, there's one underlying principle: Help the customer expand his market. That's clearly what happened with The Andersons of Indiana, whose grain producers got their first trainload rates for export via Family Lines-served ports, namely New Orleans, Mobile, Pascagoula, Savannah, and Charleston, among the 12 major ports served by SCL or L&N. "What we were trying to do was simply to open up the export world to our shippers," Alexander says.

Grain currently accounts for 4.6% of Family Lines revenues, and along with food products (7.3%) comprises one of the new modules. Others include: phosphates and fertilizers (12.1%), chemicals and petroleum products (9.1%), paper and forest products (9%), construction materials (7.8%), automotive (5.2%), metal products (5.7%), intermodal (7.9%), and miscellaneous products.

From the standpoint of the traditional railroad organization, Funkhouser says, the move to marketing modules has been the biggest change so far. Another change from tradition that both Funkhouser and Alexander are looking for is deregulation of rates. "I would like to see price deregulation, but I want to see it phased in over a reasonable period of time, particularly if to obtain it we lose antitrust immunity," Funkhouser says. "I think we might be able to live without general freight rate increases and antitrust immunity if we had a four or five year period that would permit us to increase rates over and above our costs, and to build in some financial

Prime Osborn states

With 33 years of railroad experience, including 28 with the Family Lines and pre-Family Lines roads, Prime F. Osborn III, chairman and chief executive officer of Seaboard Coastline Industries, has credentials for saying:

"Some critics of coordination, consolidation, or merger have suggested that mere cooperation is the better answer. I don't believe it."

The statement is part of Osborn's testimony for the proposed merger of SCLI and Chessie System, which would produce, along with a new parent company, an end-to-end consolidation of two previously consolidated groups of subsidiary railroads, the Family Lines and Chesapeake & Ohio/Baltimore & Ohio.

Osborn says the Family Lines system itself is testimony that affiliation rather than cooperation produces interline routes that are faster and more direct and economical. "This we have done," he says. "Before the formation of the Family Lines, on traffic moving between the Northeast and the New Orleans gateway, SCL would deliver to the L&N at Montgomery because SCL would receive a longer haul. However, delivery to the L&N at Chattahoochee provides a shorter route and better service. Traffic over the Jacksonville-Chattahoochee line has grown enormously since the affiliation.

"On traffic from New Orleans to the Carolinas or the Northeast, L&N would deliver to SCL at Birmingham. Now L&N delivers to the West Point Route at Montgomery as part of a much shorter route through Atlanta providing improved service."

Affiliation also promotes innovation, as exemplified by a backhaul program for piggyback service in which peanuts are carried on the return from Georgia to Chicago. "Without our affiliation," Osborn says, "there would have been little incentive for SCL to participate in the program, because of the relatively short

the case for a merged SCLI-Chessie

"Whether it is done through management initiatives, as here, or through railroad failures, there will take place a restructuring of the country's rail system. Government should have but one role: to provide the proper climate. . ."

Prime F. Osborn III
Chairman and Chief Executive Officer
Seaboard Coast Line Industries

haul it would have received to Montgomery. But because L&N receives the long haul to Chicago, this is very attractive business for Family Lines."

Piggyback, Osborn contends, would play a big role in the ability of a Family Lines-C&O/B&O affiliation to meet highway competition more effectively than the two groups of railroads can operating separately. But this isn't the only way their ability to compete with truckers would grow with such affiliation. Says Osborn:

"The benefit includes the recapture to the rails of a lot of coal traffic which now is being trucked in our area from coal mines. This is coal which we could move more cheaply and without the adverse impact on public highways if we are permitted to improve our car utilization through the proposed combined operations.

"Our studies revealed the probability of diverting 18,000 carloads of trucked coal traffic by the third year after merger."

Another 18,000 carloads, originating on L&N and moving south, would move more directly because of a proposed connection at Deane, Ky., that would allow coal movements over the Chessie or Family Lines' Clinchfield to SCL for delivery to southeastern utilities. That's one improvement that only affiliation could bring, Osborn says.

If railroads hope to survive under private ownership, Family Lines-style affiliations are an absolute necessity, Osborn contends. That's because many drawbacks to profitability would be eliminated. The railroad industry, Osborn says, can no longer afford to cooperate according to the common practice that Osborn describes as follows:

"When the revenues for a transportation movement go to two interline carriers, each carrier is going to try to obtain its maximum haul, and maximum revenues, if at all possible. And if overall speed, efficiency, car utilization, and energy conservation suffer, then that's to be expected. Nor is one carrier going to be so free in permitting its equipment to be used by a connecting railroad as it would for an affiliated carrier; or, be willing to coordinate the use of properties and terminals."

As for the proposed coordination with C&O/B&O, Osborn says, "Our studies of various possibilities made it clear to us that an end-to-end affiliation with the Chessie would result, in effect, in an expansion of single-line service; would eliminate various problems, including service and rate problems; would simplify terminal operations and car tracings; would result in faster and more reliable service; and, very important to us, would improve car and locomotive utilization."

Osborn refers to the U.S. Transportation Department's call for "fundamental decisions" to determine the future of the railroad industry, especially decisions for further consolidation. "Numerous studies have been made by private and by government interests in recent years, and all of them speak of declining rail service and the deteriorating financial condition of the railroads," Osborn says.

"Virtually all of them say that railroad management must take action, and no one really can take issue with a statement that such action must include ways and means to improve services through maximum efficiencies.

"Whether it is done through management initiatives, as here, or through railroad failures, there *will* take place a restructuring of the country's rail system.

"In that regard, government should have but one role. That is to provide the proper climate for the development by railroad management of plans which will bring efficiencies, improve financial strength, and maintain and improve transportation services."

For those plans by railroad managements, Osborn concludes, the Family Lines system provides a very good model.

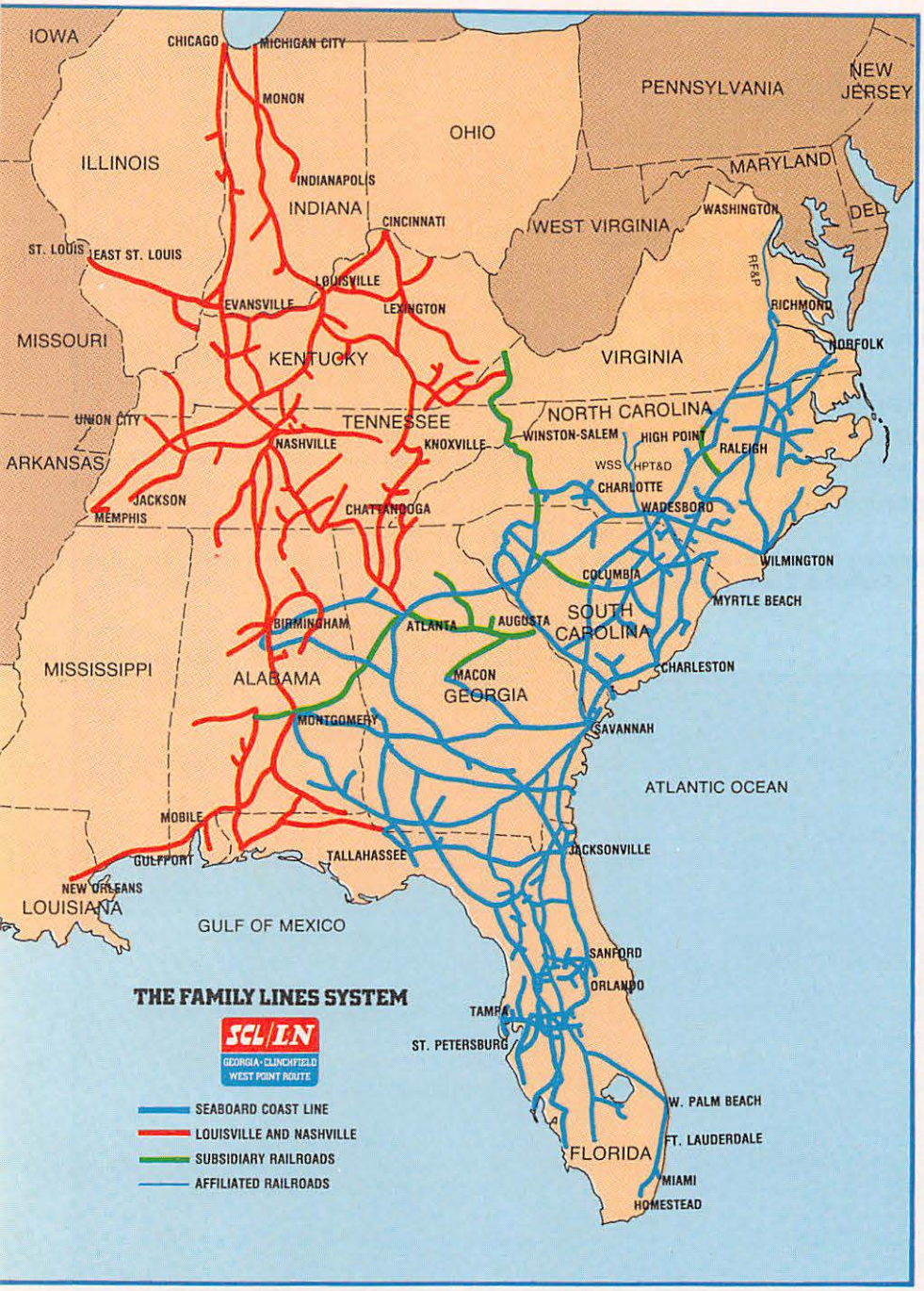
strength with a reasonable return on investment.

"But we would still need immunity for joint rate making, otherwise we'd just have chaos. And we also need it for mergers. I think that the railroad industry is plagued with excess plant and too much competition; consolidations are needed in the public interest. It is doubtful that mergers of parallel lines would be permitted without antitrust immunity."

Alexander views a deregulated price environment as something totally foreign but says: "That's a problem we'd like to live with."

● **Best-route flexibility.** The strategy for taking advantage of an already favorable commodity base and of eventual rate-making freedom will be matched by operating strategy designed to take advantage of a favorable Family Lines route structure—or restructure. It's simply a strategy of pursuing the advantages of merger without merger, which is what the Family Lines concept is all about. It means finding the best route for the good of Family Lines as a whole.

"That's the true Family Lines concept," says the man in the middle of it all, David C. Hastings, SCLI executive vice president-operations. That means, for one good example, making better use of the "little railroads" as a bridge group to improve routings for SCL or L&N. It's especially important for coal traffic, on which rates are point-to-point. Thus,



Clinchfield is handling more coal trains, especially those that formerly took a circuitous L&N route to the Southeast.

"The name of the game is to bring more to net, and that's where the little railroads fit in," Hastings says. "We're simply striving to find the most economic route in relation to the entire system, and the small roads are going to be a tremendous asset."

Efficient routing, however, depends to a large degree on efficient terminals, and there has been and will continue to be some equally judicious yard improvement. Hastings is especially encouraged by Family Lines' two showcase yards, the new L&N Osborne Yard at Louisville (*RA*, Feb. 13, 1978, p. 16) and the newer SCL Rice Yard, a dual-lead hump facility at Waycross, Ga. The new facilities have enabled Family Lines to eliminate flat switching at several dozen other locations and to drastically improve train classification and blocking. They have also, Hastings contends, helped bring about a trimming of transportation ratios that seems sure to continue.

Two more new yards are on the drawing boards, along with two major consolidations. "Short of making these kinds of capital improvements, I don't know that we can milk transportation down much further," Hastings says. The new yards won't be on the scale of Osborne or Rice, but they'll be just as strategically located and well designed. The first is likely to be at Flomaton, Ala., and would be the key to improving the flow of L&N-originated chemicals traffic and L&N-delivered coal and export-grain business. The second will be an industry support facility near Jacksonville.

● **High-level operations planning.** Decisions for new and improved terminals as well as for radical routing changes are likely to flow from the new Family Lines group headed by Charles D. Leddon, vice president-operations planning, who reports directly to Funkhouser. Few railroads have elevated this function to the status it seems to have on the Family Lines, although Leddon takes great pains to maintain a low profile. That helps ensure acceptance in an area that too often is suspect because of traditional operating-industrial engineering clashes; also helpful to Leddon's group is the fact that they all have operating backgrounds.

"It's unusual for a department like this to have the stature it has," says Leddon, who saw the benefit of operations planning during a stint as vice president-operations for L&N. He says the approach must be innovative rather than just to monitor and challenge operating practices, and a major element is "truly engineered standards" for measurement of innovation versus standard procedure.

This applies especially to terminals, Leddon says. "If you want to talk about the true measure of yard performance, you need to go to a higher level than just cars per engine hour. You have to relate yard engine operations to total carloads originated and terminated on the entire system." On that basis, he adds, there have been significant improvements in yard engine productivity on both L&N and SCL. "We probably have the most effective program of terminal control standards anywhere," Leddon says. "Anymore, I don't view our major terminals as having much inefficiency, but there's a great potential to improve our overall flow of traffic, because of those very terminal improvements."

For that, coordination of the four Family Lines operating departments is needed, especially for crucial blocking and scheduling adjustments. Although models are used for evaluating the alternatives, "a lot of it turns out to be just detailed evaluation of origin-destination printouts." Leddon also heads the Family Lines locomotive committee that determines annual power needs railroad by railroad, as well as the capital roadway expenditures group.

Although Leddon is satisfied with operations of the big terminals, a system-wide terminal management system is be-

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With its dual-lead hump (foreground), Rice Yard at Waycross, Ga., can put through 5,600-5,700 cars a day, compared with 3,400 for the four flat yards formerly there.

ing designed, with automated demurrage records as the basic reporting document. He says the objective is to improve terminal car-handling discipline as an information vehicle to improve car utilization.

● **Improved car scheduling.** Of all the projects in which Leddon's group is involved, he says, "If I had to pick one area more important than others for making use of a department like this, it would be car utilization."

Except for coal cars, functions of previously separate L&N and SCL car utilization departments are being consolidated in a central group at Jacksonville, an effort that started May 1. "The savings are going to be tremendous," Dave Hastings says, as he looks forward to development of a car-scheduling plan for the entire Family Lines system.

In charge of the consolidation is Earl Anderson, general manager-car distribution and utilization department. For the time being, he says, L&N and SCL people are just getting used to working side by side. Eventually, the lines will blend into system responsibilities for all types of equipment. But already, Anderson says, there has been a big saving from wiping out the time lag that formerly existed in L&N-SCL communications on car orders and supply.

Full consolidation of car distribution people—beyond merely working next to one another—is expected by year's end, Anderson says. Already consolidated are intermodal distributors. "We were continually flowing more trailers to the L&N than were needed; now we don't have that because we are looking at the L&N orders on a daily basis and filling them only as needed," Anderson says. "The time frame for reacting to a request for empties has just about been wiped out."

Also consolidated is the forest products equipment section, with a manager and two assistants, the basic section setup. The manager is reponsible for balancing equipment among FL railroads. Other categories to be consolidated include free-running boxcars, equipped boxcars, covered hopper cars, flatcars, and gondolas. Coal hopper cars will remain under control of the Louisville operations center.

Cars are designated to fill orders in two ways: (1) A car is directed to a shipper at a particular location, or (2) a car is directed to a high-volume terminal such as Birmingham for further distribution. Eventually, Anderson says, there will be systemwide computerized car-ordering.

Plans include a computerized car trip-scheduling system. "However," Anderson says, "we do not intend to schedule or designate cars for loading until the change of status from loaded to empty has occurred." Car scheduling will be a crucial part of a Family Lines effort at controlling expenditures for new equipment while improving the utilization of equipment, capacity of which is holding steady, Anderson says. He emphasizes that the car distribution center is a 24-hour-a-day operation with direct links with the marketing and transportation departments.

● **Measuring utilization more broadly.** Just as Chuck Leddon measures terminal efficiency with an overall system viewpoint, so Anderson sees car utilization in a perspective much broader than that of mere car cycles. "As far as I'm concerned," he says, "the best measurement you can get is the ratio of total cars on line to total loads for each day. In other words, for every load you handled that day, how many cars did you have on line to accommodate that load? You want enough, but not too many."

By that standard, Family Lines generally has had a surplus, except for gondolas, though the cars may not have all been in the right place at the right time. For the first six months of the year, Anderson says, the SCL ratio was just under 10 and the L&N's just over 12, but both represented about a half-car decrease (improvement) from first-half 1978. Further improvement is seen to about 8.5 for SCL and just under 10 for L&N, in the near future. Meantime, more measurements will be developed for determining the best ratios under all circumstances.

Consolidation is evident also in the Jacksonville operations center, where Family Lines schedules are coordinated by a manager, transportation supervisor, transportation managers-East and -West, along with caboose, mechanical, and cost control managers.

● **FL's pride and joy.** A big contributor to Anderson's hopes for success with consolidated car distribution is the big new yard at Waycross, Ga. If any single facility can symbolize the direction of a railroad and provide evidence of commitment to good management, Rice Yard is such a facility.

"Our pride and joy," Dave Hastings says, "are our two new yards." But Rice, with its dual-lead hump and totally strategic location, may have the greater impact of the two, especially in view of the broader commodity mix of SCL. "The capital saving in the design of that yard is just astronomical," Hastings says, after explaining that originally two separate humps were planned. But there's an even greater system significance, as Leddon explains: "To a large extent, we can rearrange the entire Family Lines system, blocking and scheduling, that is, with relation to Rice Yard."

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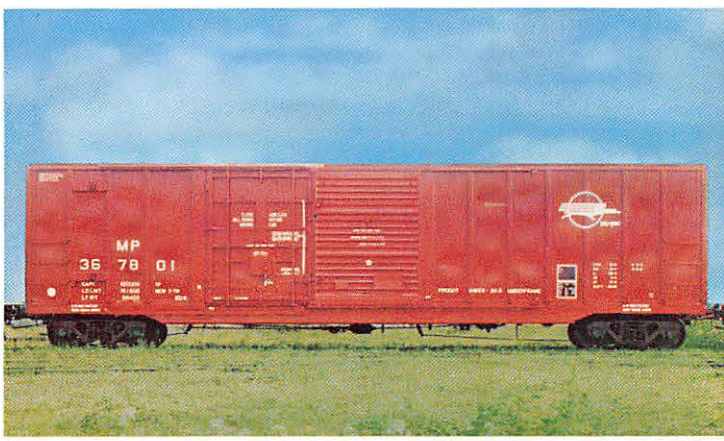

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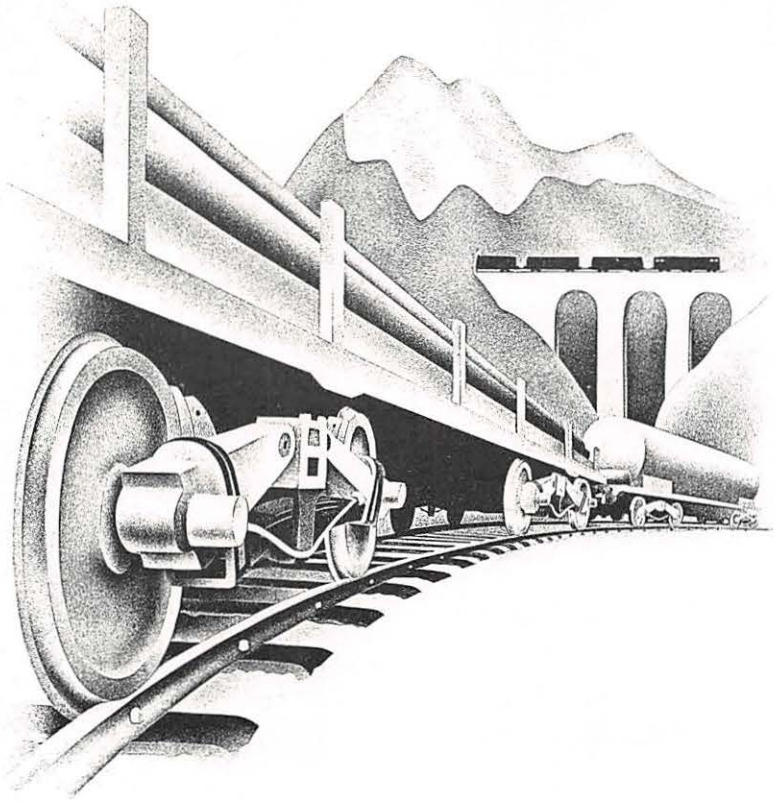

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Newly upgraded cars leave shops at Waycross, Ga., where Family Lines is adding a $7.5-million locomotive maintenance facility.

That is being reflected in the terminal's production statistics. Since March 1, less than a year after it went into service, the hump's throughput has averaged more than 3,000 cars a day, including a high day of 3,704. Though it was expected that it would take several months just to reach the 2,000-car-a-day level, that rate was achieved within one month, says a man who has been involved with Waycross operations for many years, A.A. "Gus" Karle, terminal superintendent. "We were able to make a quick transition to a computerized operation," Karle says. "We can handle a sustained 3,600 cars a day over the crest."

With the new hump, overall Rice throughput is 5,600 to 5,700 cars a day, compared with 3,400 for the former flat facility there (four separate yards). The hump was built while the former facility continued to operate. There was little choice: 60 freight trains a day are handled at Waycross, over six converging routes, plus 10 intermodal and Amtrak trains.

● **Impressive statistics.** Almost every day, Rice Yard handles 72 classifications. In addition to 64 class tracks, there are 12 receiving tracks, 10 north forwarding tracks, four south forwarding tracks, 10 local tracks, plus car storage and loop track—for a grand total of 145 miles of track with 450 switches, of which 116 are powered. Lead tracks are 132-pound welded rail; body tracks are 100-pound welded relay rail.

The $40-million terminal also has two computer systems (one for continual inventory of all cars from arrival to departure, the other for humping operations control). For each, there's a standby computer. The entire yard is covered by closed circuit TV cameras, for monitoring of arriving cars according to advance consists, before input to the inventory control computer. And there are paved roadways between each receiving and forwarding track to facilitate motorized car inspections and mechanized repair procedures.

Though there are two tracks over the hump, both are not always used at the same time; they may be or not, depending on circumstances. "If we have 15% or more of a train's cars going to the other side [there's a crossover at the bowl end of the hump] then we don't have dual humping," Karle explains. In other words, when classifying throughout the full 64-track is required, single-track humping prevails. When classifying can be split between the 32-track halves of the bowl, both hump tracks can be used at the same time.

Still coming at Rice Yard are a new $7.5-million locomotive servicing and light repair facility, expected to be ready in October, and an automated $1.3-million car-cleaning facility scheduled for completion in early 1980. Farther down the road is a $3.1-million running-repair-track facility, for which construction will start in fall 1979.

As for maintenance of the big new facility, Karle has chosen an every-Tuesday schedule: There are two four-hour maintenance periods (signals, scales, track) for half the yard at a time. Tuesday and Wednesday are Rice Yard's lightest days. "With this regular maintenance schedule, we've kept the yard at a high degree of reliability," Karle says.

Rice Yard is evidence that Family Lines is committed to improving its transport capability, even when that improvement requires major capital outlays. There is other proof, some of it on a smaller scale but just as important. For example, there's the wheel shop consolidation completed earlier this year at Hamlet, N.C.,

at a cost of nearly $2 million. Included was a new automated reclamation line for freight car roller bearings, with a new Hegenscheidt wheel lathe from Germany. Now, one and half shifts at Hamlet can provide the wheels that formerly required two shops working several shifts. The Hamlet facility eventually will provide wheels for the smaller FL railroads, too.

Though 1978 capital expenditures of $219 million (an impressive enough figure) were lower than those for 1977, the capital budget for 1979 will likely reach an all-time high of $329 million. That includes $248 million for equipment, especially 183 new locomotives, 130 of them for the L&N. Also expected by year's end are 2,177 new freight cars.

And in June, SCLI announced that a $275-million expenditure had been authorized for 6,300 more new freight cars, to be delivered in 1980 and 1981. The new equipment includes 2,300 coal hopper cars. Overall capital expenditures proposed for 1980 alone total about $600 million.

● **The need is clear.** Family Lines' managers clearly have little doubt about the markets for which the planned capital expenditures are intended. Last year alone, 295 new industries located on Family Lines routes and 136 existing plants were expanded. Total capital investment in those new and expanded facilities is estimated at $1.8 billion, and expected new revenues are estimated at $67 million a year. For first-half 1979, Family Lines announced the location of 231 new or expanded industries with capital investment totalling an estimated $1.5 billion; they are expected to eventually contribute $50 million a year in added revenues.

As for traffic through the first half of this year, there were revenue gains in nine of the 10 major FL commodities, along with a solid improvement in piggyback. Revenues from paper and allied products alone were up more than 10%, after an 11.4% gain in 1978, because of a thriving paper industry in Family Lines territory and the capture of a major new movement of Canadian newsprint that formerly went by water.

Strategies for preserving those gains are becoming clearer as FL's marketing modules settle into productive patterns. Supporting them will be operating strategies just as clearly defined. That makes for an unbeatable combination, when a railroad has strengths such as those of the Family Lines.

That also makes for a great deal of satisfaction, something that seems in short supply in the railroad industry these days. It will probably be something akin to what "Gus" Karle feels when he looks out from the Rice Yard tower: "the satisfaction of seeing traffic flow." ■

Spence and the L&N: The bad

By GUS WELTY, Senior Editor

When Richard D. Spence left the presidency of Conrail and took on the presidency of Louisville & Nashville just about a year ago, there were some observers who wondered which was the frying pan and which was the fire. There was more than a little "feeling sorry" for Spence, a fine person as well as an excellent operating officer.

Well, feel sorry no more—not, at least, for Dick Spence and L&N. For his part, Spence terms his first year at Louisville "a great experience"—and as for L&N, its head is up and its shoulders are back, and it is looking the world and the FRA squarely in the eye.

Admittedly, L&N a year ago was a railroad with problems, many of them big problems. It had suffered through a couple of major, loss-of-life accidents. FRA was about to land on it, hard, with operating restrictions that Spence to this day calls "unwarranted," as well as "disastrous." The road was under heavy fire from press and politicians for an alleged inability to move eastern-Kentucky coal. Shippers, among them major chemical shippers, were departing the scene. Institutional investors didn't want to talk about L&N. Generally, says Spence, "We had an enormous number of complaints about service."

Spence surveyed the situation and, with strong backing from SCLI, went on the attack.

● **Power comes first.** The first target was motive power, and in the beginning L&N had to get by with leased units, as many as 125 of them. Now, however, it's taking delivery on orders for 130 new units—and it even has 30 units leased out to another road. Says Spence: For the most part, "we have the power problem behind us."

Next up was improvement in car utilization, restoring fluidity to terminals, cutting down on car-cycle times and reducing the number of foreign cars online. With additional power available, terminals were opened up. Cycle times have been pulled down, the number of foreign-line cars on L&N has been pulled down, "and at the same time, we've pulled our service up because we do have the power to clear the terminals. These improvements," Spence declares, "have made a tremendous difference in the operation of the railroad—and I look for a continuation of those trends."

All the while, of course, L&N was working on fixed-plant improvement with about $154.7 million scheduled to g into track and other fixed property thi year and with L&N making plant improvements at a rate up to what Spenc thought would be physically possible.

Already, the road has seen modest improvements in its transportation ratio but Spence sees these gains as only beginning. He points to the impact of improvements in track, and of increase availability and reliability of motive power—areas where L&N has been trying mightily to improve, and where a lot of effects are now being felt. "For a long time," Dick Spence reflects, "we were just fighting fires. Now, we're beginning to fine tune things such as initial and final terminal delay. We're beginning to get a handle on overtime again. If you look at today against a year ago, we've really been able to get yard costs down. We haven't gotten road costs down as much, but FRA restrictions have impacted us there. We're going to be able to pull up train speeds to a greater extent, and when we do that, it's going to have a big effect in terms of 12-hour relief and of getting in and out of terminals."

● **L&N, the "target."** Train speeds? There is no better word than "bitter" to describe Spence's reaction to the way L&N has been treated by FRA: "I do have some knowledge of what the railroad industry looks like in total, and think that if you considered everything, L&N was in comparatively good condition. But L&N was picked out as the target—and in that connection, the timing of the accidents at Waverly and Pensacola was a tragedy in its own right." When he got to L&N, Spence says, he found out that the FRA-restrictions orde was already being drafted; he says he had assurances that an order would not b issued until the Administrator came and actually looked at the property—"I told him that things were not as bad as they were being described. But he never go here."

Once under the order, L&N fought back, in the courts, before an administrative law judge and in informal discussions. Ironically, it was getting major sections of track released from restrictions and more pending—but then the railroad won a lower-court order and the release activity was then stopped pending appeal, while, Spence observes, "the FRA moved on to some other railroads."

In the meantime, L&N has also been taking its case to other people who coun

old days are bad no more

President Spence hosts chemical company traffic officers aboard a track-inspection car rolling over what had been publicized as a "dangerous piece of track" between New Orleans and Pensacola. Their comment: "My God, what's all the trouble been about?"

—customers and investors.

"We borrowed Santa Fe's track inspection car, the one with the theater-type seating in the rear, and we invited about three dozen senior traffic officers from major chemical companies to ride the railroad," Spence says. "We took them from New Orleans over what had been highly publicized as being a 'dangerous piece of track' between New Orleans and Pensacola and then up to Birmingham. And they asked, 'My God, what's all the trouble been about?' Some of them had ridden other railroads, and they told us we were a lot better than what they had seen other places. Then we took 25 or 30 institutional investors over another controversial part of the railroad, between Knoxville and Corbin, in the area where some people were saying that we couldn't handle eastern-Kentucky coal. They came away ecstatic. 'What a wonderful railroad,' one of them said. It was a very interesting experience."

The story became much the same in dealing with the producers in the Kentucky coal fields. L&N worked on improving service, and it also worked on car order ratings. Last year, Spence recalls, "if we had filled all the ratings they had for unit train and single-car shipments in eastern Kentucky, at the time that all the furor was taking place, we would have been loading 230 million tons of coal a year—which is about one-third of the total national coal production."

Finally, L&N succeeded in getting the ratings revised, says Spence, "down to something approaching reality, so we won't be in that box again even if we do go into a period of car shortage. For all of this year, by the way, we have been supplying 100% of the car orders for coal-carrying cars. And today, we really have great friends in eastern Kentucky. We've come from a terrible, antagonistic situation to a point where we have a great rapport with eastern-Kentucky coal interests. That's been another interesting phenomenon."

● **Doing—and telling.** Employee morale was yet another problem that had to be attacked, at a number of levels, and here the approach was one of show-and-tell: Show employees that L&N was dedicated to improving itself, then go tell newspapers and television what L&N was in fact doing in order to demonstrate, forcefully, that the bad old days were bad no more. That effort, too, has paid off (*RA*, Aug. 27, p. 16).

Financially, L&N also appears to have done a turnaround. Last year, with all of its other hurts worsened by the coal strike, it lost $32 million, and—battered by another rugged winter—it dropped $11 million in first-quarter 1979. But the loss had been cut to about $1 million by the end of June, and, as Spence puts it, things have been looking comparatively better since about the end of February.

What lies ahead? For one thing, a step-up in equipment acquisitions. This year, L&N's freight car program consists mostly of acquisition of specialized cars, not in large quantities. But for 1980-81, the current plan—which will depend to some extent upon improvement in the coal market and in getting coal rates up to adequate levels—calls for acquisition of 2,300 open-top hopper cars.

As for fixed plant, Spence will say that L&N has to continue its rail and tie programs and has to do a lot more ditching and drainage work. At the same time—looking toward a brighter future for eastern-Kentucky coal—it has to build.

Currently, L&N has a yard project authorized for Ravenna, Ky., similar to one recently completed at Etowah. And it's working on simulations designed to show where and how line capacity must be increased to handle the expected traffic growth. Three new stretches of double track have already been authorized in the Corbin area, and simulations are indicating that the next-up work on capacity improvement will be in the same area.

"From the looks of things now," Spence says, "we're going to be able to do a good job of staying ahead of the growth that's coming."

Are there any regrets, for this New Mexico native who worked his way up from brakeman to vice president-operations of Southern Pacific before heading into a bad scene at Conrail (as, in effect, the resident railroader in a non-railroad atmosphere) and then moving to another troubled property, L&N? None, apparently, at all. Spence seems to be having the time of his life, having "a great experience"—which, in fact, has been a pretty great one for L&N, too.

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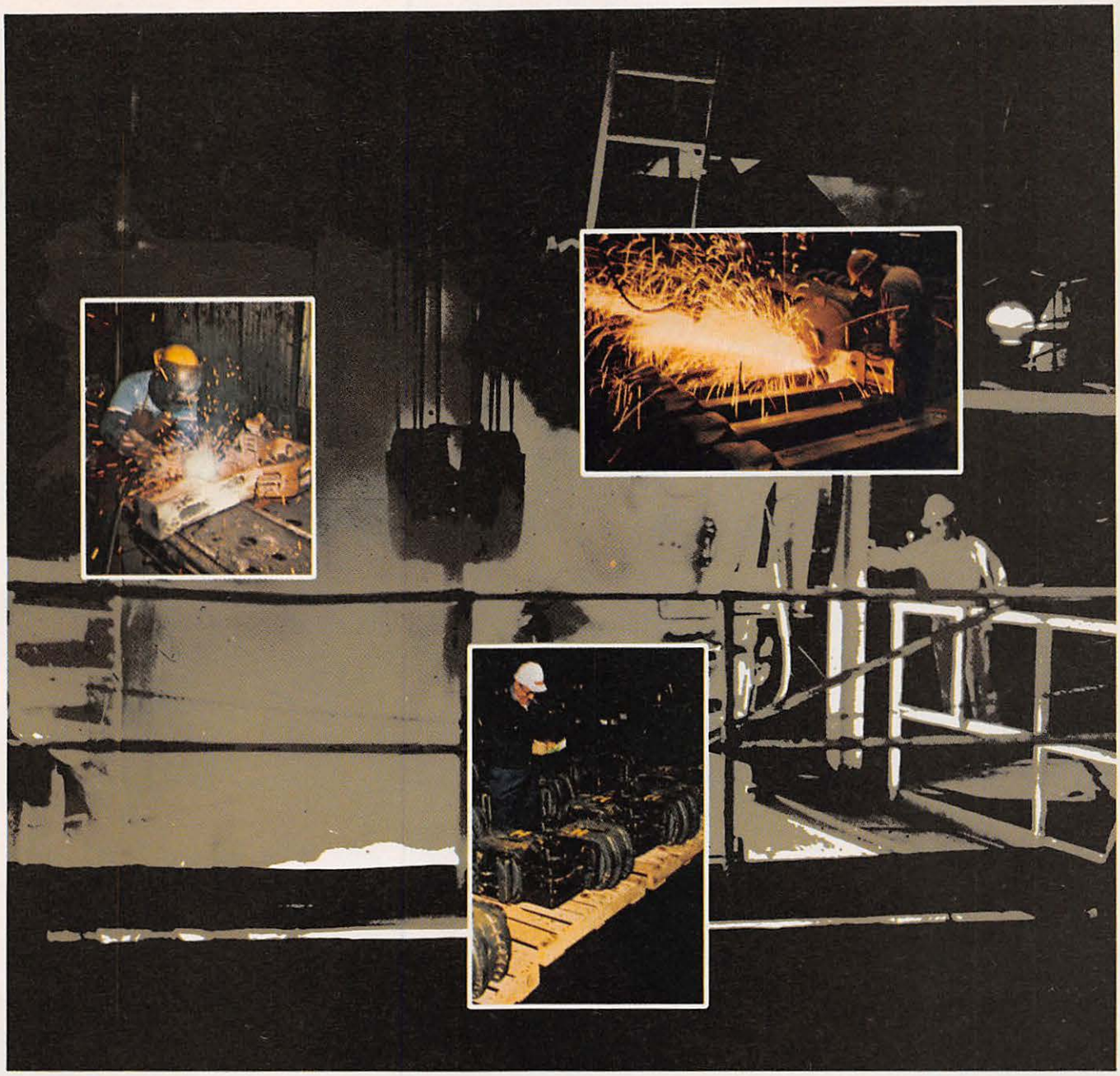

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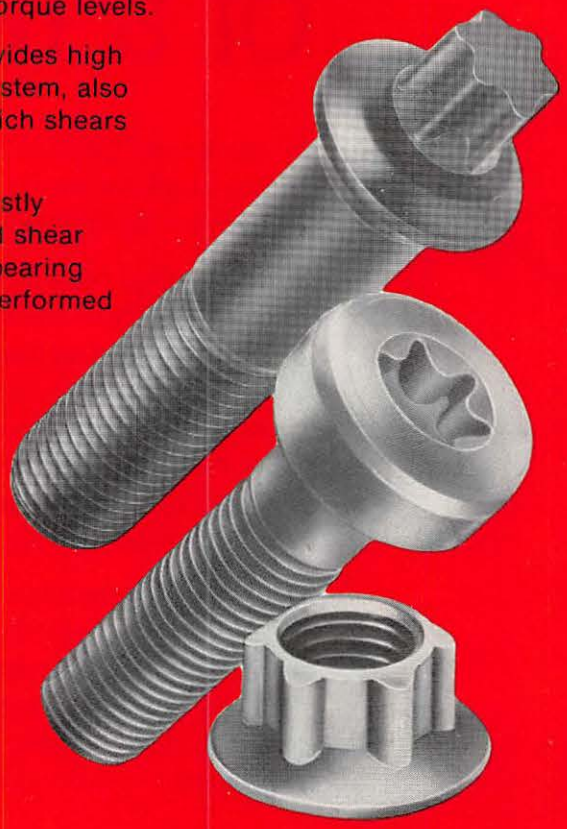

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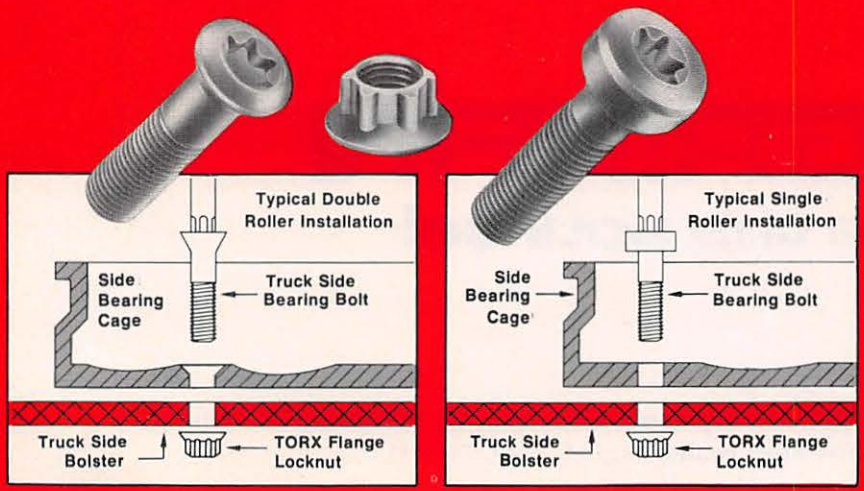

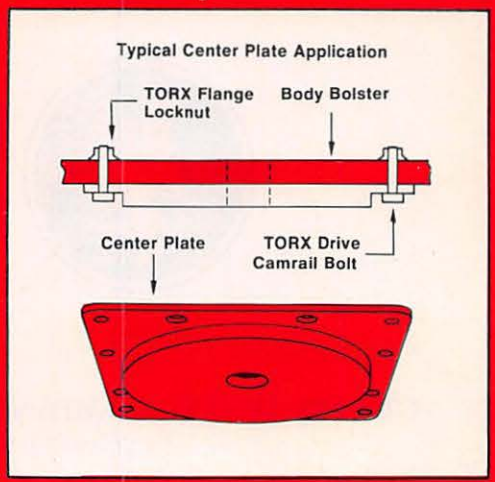

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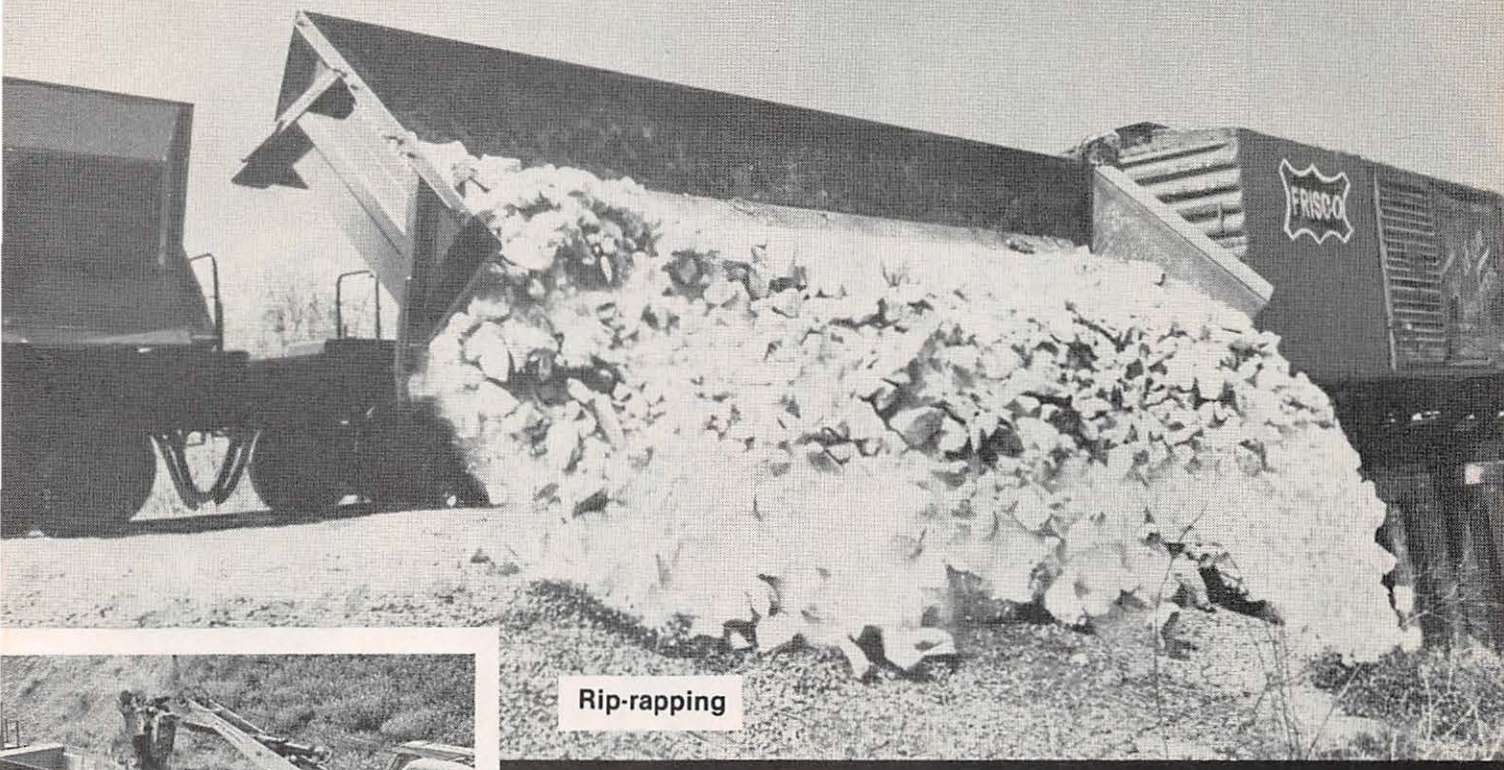

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Now this clean cab radio fits in every cab

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In a single, convenient modular package Trackstar incorporates its own fully transient-protected 72VDC power supply and, optionally, a built-in microphone.

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Railway Technology, Worldwide

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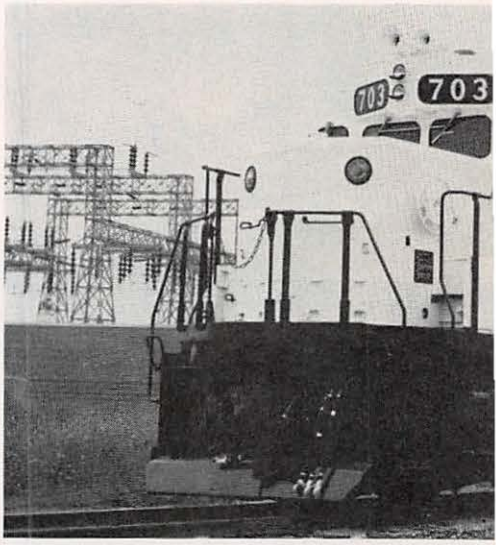
EMD will unveil its new 50 series



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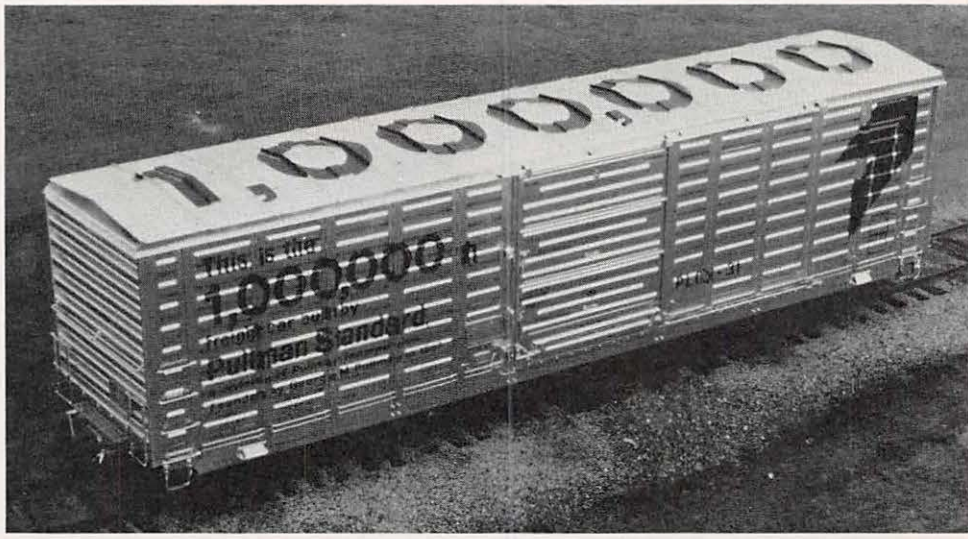
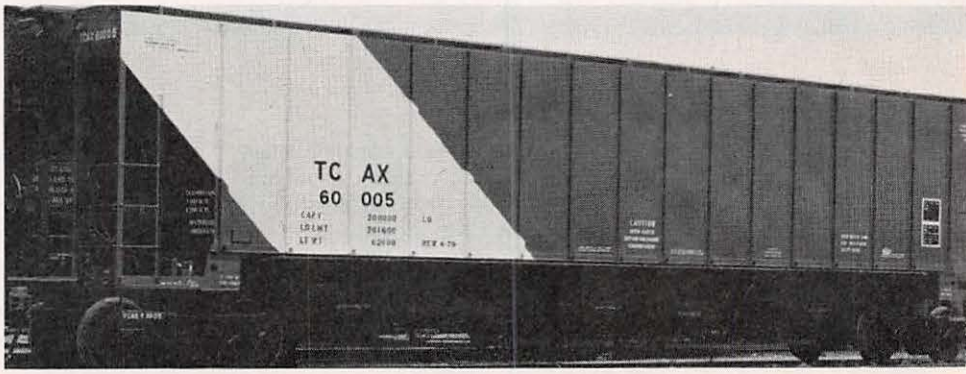




significant achievement in performance which is accomplished by improving adhesion between the wheel and rail from 18% to 24%."

Pullman to exhibit Car No. 1,000,000

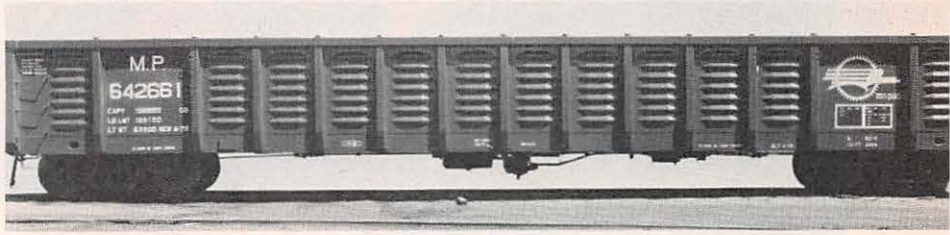
Star of the Pullman Standard show will be the one millionth freight car built by the company, a silver-and-blue painted 50½-foot, 70-ton boxcar. Among other cars to be shown by Pullman Standard: an 89-foot, 4-inch all purpose flatcar equipped with PS hitches and container brackets (this car will carry a parts display); a 4,750-cubic-foot covered hopper car for grain service; a T16 Auto-Flo open-top hopper; and a 105-ton, recessed floor, high-side gondola. Also on display will be a Detroit Edison high-side gondola that can be partially disassembled to indicate parts wear.

New grain car on tap from Thrall

Thrall Car will exhibit two of its freight cars: a new model 4,750-cubic-foot covered hopper grain car (photo) designed for maximum load carrying capacity in a space-efficient configuration, and a rotary dump unit train coal car, one of approximately 9,000 which are currently in unit train service for utilities, leasing companies, and railroads.

Bethlehem displays Coalporter

The BethGon Coalporter, a lightweight, high-capacity coal car with a low center of gravity floor design, will be exhibited by Bethlehem Steel. The Coalporter prototype underwent squeeze, stress, and impact tests and was subjected to an exhaustive series of rotary dump tests. As of May 1979, the prototype had accumulated approximately 100,000 miles in unit train service on a western railroad without any adverse effects. An additional 484 Coalporters are now in service and 1,100 more are scheduled for production within a year. An unusual feature of the Coalporter is the double U floor design, which increases the load capacity by several tons. The car utilizes standard center sill construction with the floor extended downward between the trucks to within about 13 inches of the track bed.



Gondola and coal car in Greenville exhibit

On display by Greenville Steel Car will be the company's two newest cars, a heavy-duty gondola (photo) and the Twin-Tub Coal Hauler. The gondola has 1/4-inch corrugated sides, hat section 5/16-inch stakes, nonterminating 3/8-inch end construction, recessed grab irons, and 3/8-inch corner posts. The Twin-Tub Coal Hauler weighs about 10% less than conventional coal hopper cars and utilizes all standard, high-strength alloy materials with no steel in excess of 50,000 psi.

From Berwick, a new steel-hauling gondola

Berwick Forge & Fabricating Division of Whittaker Corp. plans to introduce a new gondola for steel hauling service. The 52-foot, 6-inch, 100-ton gondola features 5-foot sides; 3/8-inch thick HSLA end sheets with four 5-inch continuous full depth corrugations and 5/16-inch flat end lining; 6-foot by 6-foot by 3/8-inch structural tubing side and end top chords; 13-inch, 31.8-pound HSLA channel side sills; 51.2-pound center sills; six 4-inch stringers; and flat steel floors.

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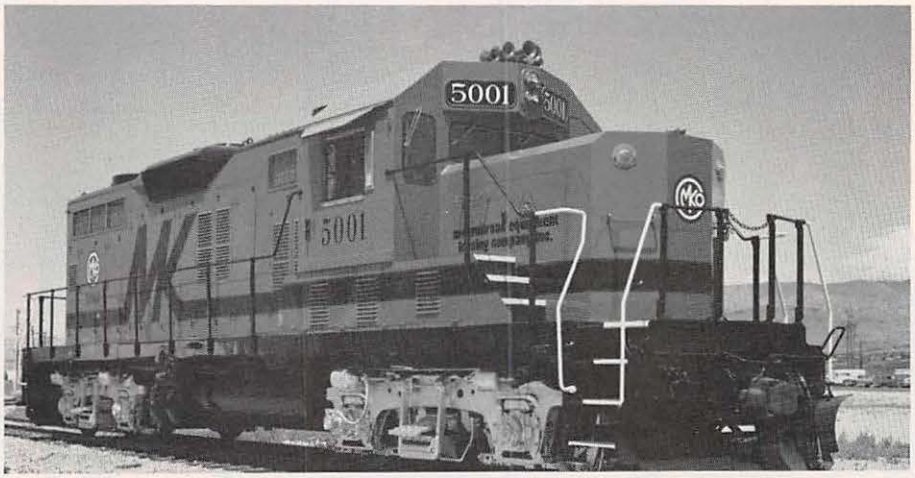
RSA Track Exhibit

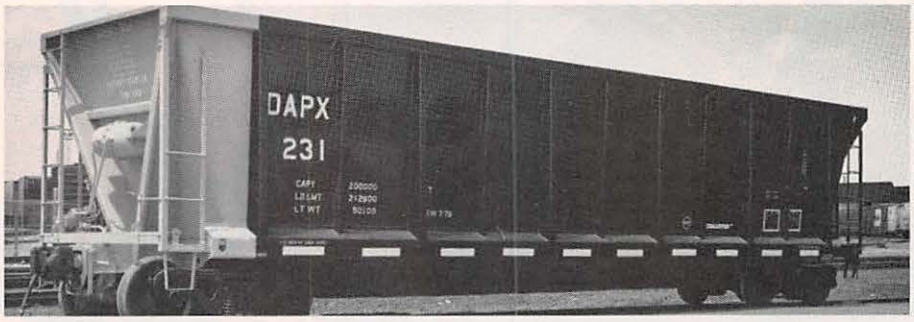
M-K: Sulzer-powered, rebuilt locomotive

On display by Morrison-Knudsen will be the company's TE50-4S, which M-K describes as "a fuel-efficient locomotive, completely remanufactured and powered by a Swiss-made Sulzer six-cylinder diesel engine." Designed for use on short hauls, in yards, and on short lines, the unit will spend its first few months working on the Wabash Valley Railroad under a demonstration lease. The T50-4S designation means the locomotive has a tractive effort of 50,000 pounds, has four driving axles, and employs a Sulzer engine. It is capable of 1,500 traction and 1,640 gross hp.



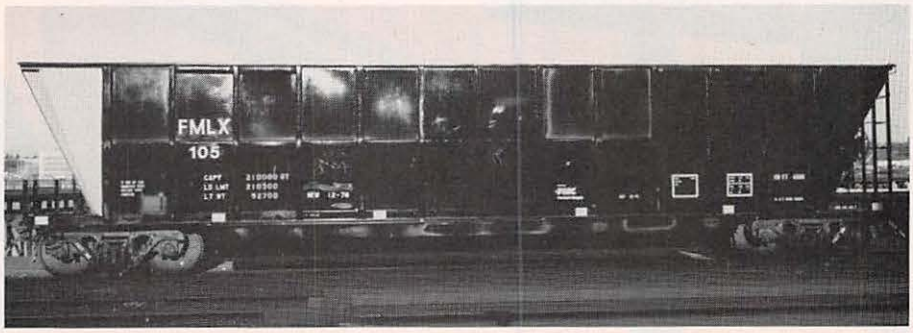
ACF: Coalveyor Gon increases payload

"Research in Progress" will be the theme of the ACF exhibit, which will feature the company's instrumented research car, its line of car parts, and the new Coalveyor Gondola (photo). Coalveyor's basic reinforced circular bottom configuration, says ACF, provides a lighter car weight and thus increases payload.



FMC: Lightweight rotary dump gondola

A dropped center sill contributes to a low center of gravity in the lightweight rotary dump coal gondola that FMC Corp.'s Marine and Rail Equipment Division will exhibit. FMC says the car is designed for high cubic capacity with the strength necessary to endure high-mileage unit train service.



Pettibone to display rerailing crane

The Pettibone Corp. exhibit will feature the Model 220 RRC Rerailing Crane (photo), the Model 250 Rail Car Mover, and the Model R.S. Hydraulic Crane.

NRUC: Max-I-Ride fabricated truck

A free-standing display at the exhibit of National Railway Utilization Corp. will feature the 10,500-pound Max-I-Ride fabricated truck, which has been undergoing testing at Lehigh University's Fritz Engineering Laboratory. NRUC will also have two of its boxcars on display. One will be set up as a theater car and will be showing continuous performances of two slide presentations: One is "The NRUC Story"; the other, "The Making of a Star: The Max Seel Story." A second boxcar will be open for inspection and will contain information about NRUC's suppliers. NRUC's refurbished private car will be part of the exhibit but will not be open for inspection.

Hoesch to show new rerailing vehicle

Hoesch America Inc. will exhibit for the first time a new Hoesch Hi-Rail equipped rerailing vehicle, featuring direct power take-off from the vehicle's engine to operate the hydraulic rerailing equipment; a rear mounted 10,000-pound hydraulic crane; compartments to house the hydraulic rerailing equipment; and additional compartments for a generator and welder. Hoesch says the vehicle has enough space to transport a completely assembled freight car truck. Also to be shown for the first time is a Hoesch hydraulic haulage and rescue device. It is designed for pulling apart vehicles when accidents have occurred and also to assist in raising overturned vehicles.

Now this clean cab radio fits in every cab

Harmon's Trackstar radio was designed to put full 8-channel performance into the space prescribed by AAR "clean cab" regulations for new locomotives.

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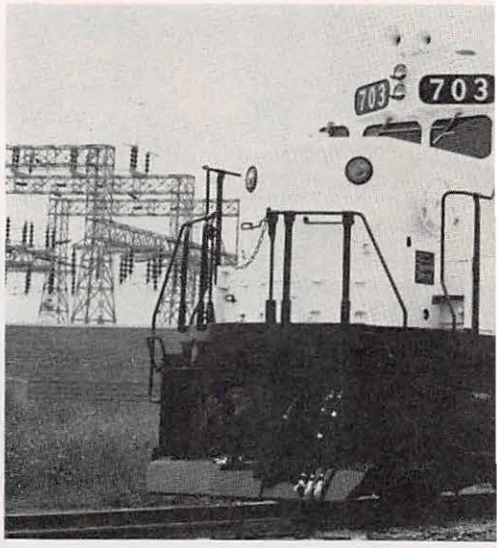

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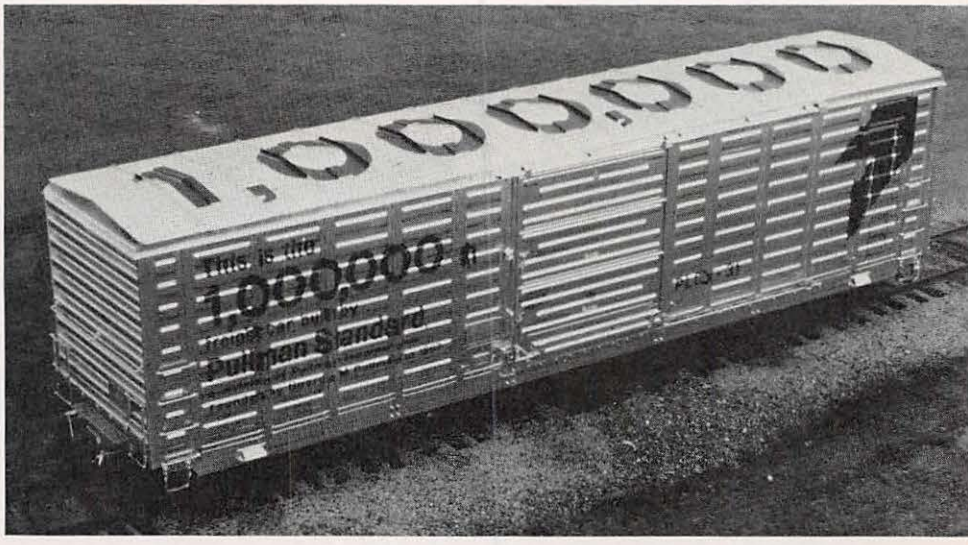
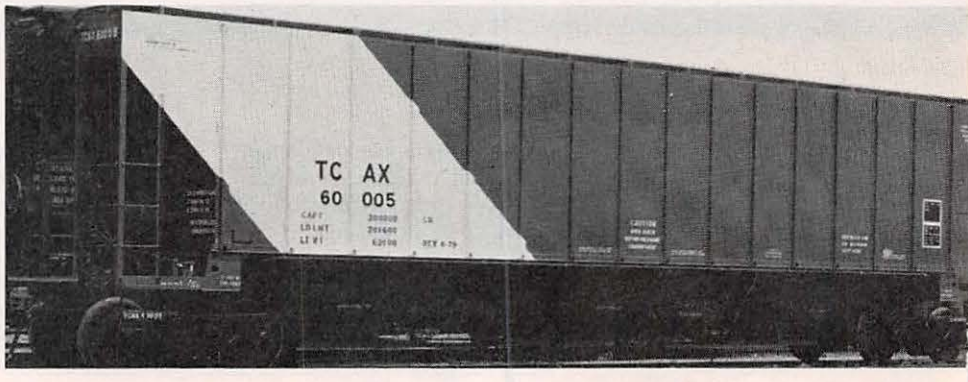
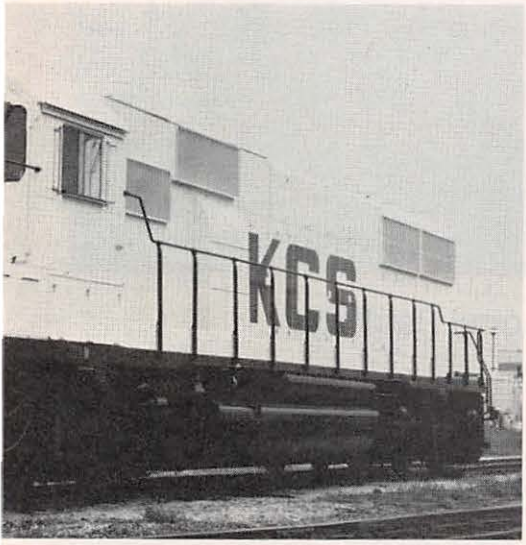






significant achievement in performance which is accomplished by improving adhesion between the wheel and rail from 18% to 24%."

Pullman to exhibit Car No. 1,000,000

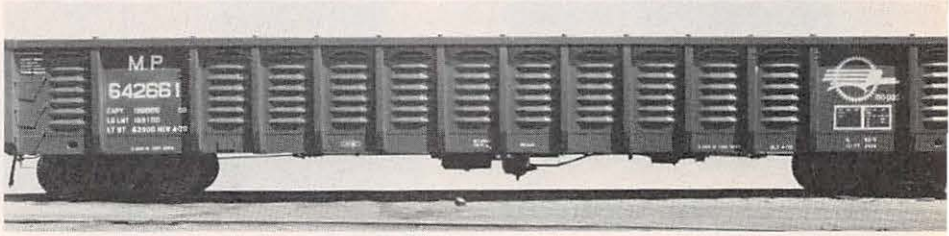
Star of the Pullman Standard show will be the one millionth freight car built by the company, a silver-and-blue painted 50½-foot, 70-ton boxcar. Among other cars to be shown by Pullman Standard: an 89-foot, 4-inch all purpose flatcar equipped with PS hitches and container brackets (this car will carry a parts display); a 4,750-cubic-foot covered hopper car for grain service; a T16 Auto-Flo open-top hopper; and a 105-ton, recessed floor, high-side gondola. Also on display will be a Detroit Edison high-side gondola that can be partially disassembled to indicate parts wear.

New grain car on tap from Thrall

Thrall Car will exhibit two of its freight cars: a new model 4,750-cubic-foot covered hopper grain car (photo) designed for maximum load carrying capacity in a space-efficient configuration, and a rotary dump unit train coal car, one of approximately 9,000 which are currently in unit train service for utilities, leasing companies, and railroads.

Bethlehem displays Coalporter

The BethGon Coalporter, a lightweight, high-capacity coal car with a low center of gravity floor design, will be exhibited by Bethlehem Steel. The Coalporter prototype underwent squeeze, stress, and impact tests and was subjected to an exhaustive series of rotary dump tests. As of May 1979, the prototype had accumulated approximately 100,000 miles in unit train service on a western railroad without any adverse effects. An additional 484 Coalporters are now in service and 1,100 more are scheduled for production within a year. An unusual feature of the Coalporter is the double U floor design, which increases the load capacity by several tons. The car utilizes standard center sill construction with the floor extended downward between the trucks to within about 13 inches of the track bed.



Gondola and coal car in Greenville exhibit

On display by Greenville Steel Car will be the company's two newest cars, a heavy-duty gondola (photo) and the Twin-Tub Coal Hauler. The gondola has 1/4-inch corrugated sides, hat section 5/16-inch stakes, nonterminating 3/8-inch end construction, recessed grab irons, and 3/8-inch corner posts. The Twin-Tub Coal Hauler weighs about 10% less than conventional coal hopper cars and utilizes all standard, high-strength alloy materials with no steel in excess of 50,000 psi.

From Berwick, a new steel-hauling gondola

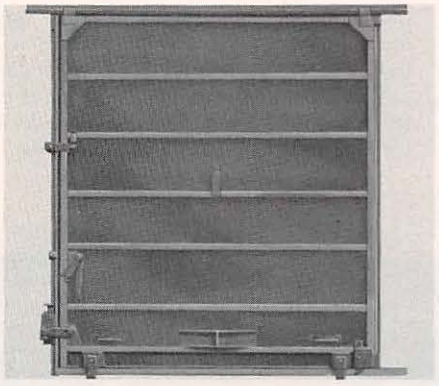
Berwick Forge & Fabricating Division of Whittaker Corp. plans to introduce a new gondola for steel hauling service. The 52-foot, 6-inch, 100-ton gondola features 5-foot sides; 3/8-inch thick HSLA end sheets with four 5-inch continuous full depth corrugations and 5/16-inch flat end lining; 6-foot by 6-foot by 3/8-inch structural tubing side and end top chords; 13-inch, 31.8-pound HSLA channel side sills; 51.2-pound center sills; six 4-inch stringers; and flat steel floors.

Isringhausen crane is tailored for rail use

A new 125-ton-capacity high-rail truck crane, designed specifically for rail use, will be introduced by Isringhausen Crane Mfg., Inc. The new crane features fingertip hydraulic controls, fast boom and line speeds, and independent outrigger operation. It is capable of lifting 250,000 pounds through a full 180-degree swing.

GE locomotive: Fuel Economy Package

General Electric's Transportation Systems Business Division will have three locomotives on display: NW C30-7 (photo), a 3,000-hp, 6-axle model, equipped with GE's 1980 Fuel Economy Package including low idle, decreased horsepower, radiator and equipment blower fans, new variable dynamic brake speed schedule, and an improved turbocharger; Santa Fe B23-7, latest new series 2,250-hp, 12-cylinder turbocharged locomotive with low maintenance, floating bolster truck, "CHEC" excitation system, modulating governor, and engine systems monitor; C&NW 136-ton switcher, designed for yard and branch-line service. This 1,100-hp, 4-axle unit utilizes twin, efficient, 4-cycle turbocharged engines which can be easily started after shutdown. GE will also have an indoor exhibit featuring a cut-away of its 4-cycle engine, and various locomotive modernization products. A talking robot will be on hand to explain the display.



Unarco: Replacement doors for boxcars

New replacement sliding and plug doors for boxcars will be among the products and services to be featured at the exhibit of Unarco Transportation Equipment. The new replacement sliding boxcar door (photo) is designed to interchange with most boxcar sliding side doors with little or no modifications. They are constructed of high-tensile copper-bearing steel for strength, and are resistant to rust and corrosion. All Unarco doors are red zinc chromate-primed. A newly designed antipilferage lock is said to meet or exceed AAR requirements. As a companion product, Unarco is introducing a replacement plug door, designed to replace standard-sized plug doors regardless of age or make of boxcar.

GATC to introduce new Airslide car

General American Transportation Corp. will display for the first time its new 4,566-cubic-foot capacity Airslide car, designed for the bulk shipment of lighter-density bulk commodities such as flour and corn starches. The new car is essentially the same design as GATC's 4,180-cubic-foot two-compartment Airslide car, but it is 9½ inches higher, providing 386 additional cubic feet of capacity. GATC will also have on display a three-car string of interconnected TankTrain cars. Each TankTrain string may be loaded or unloaded through a single connection.

North American offers the PD5000

A new 5,000-cubic-foot capacity pressure differential car, the PD5000, will be introduced by North American Car. It represents an expansion of a family of cars that also includes the PD3000 and the PD4000. A second North American exhibit will be a wrecked car which has been one-half repaired; this is designed to demonstrate the company's repair and maintenance capabilities in a "graphic and unusual" manner. In conjunction with Pullman Standard, North American will also demonstrate its mobile repair capabilities at the Pullman track site.

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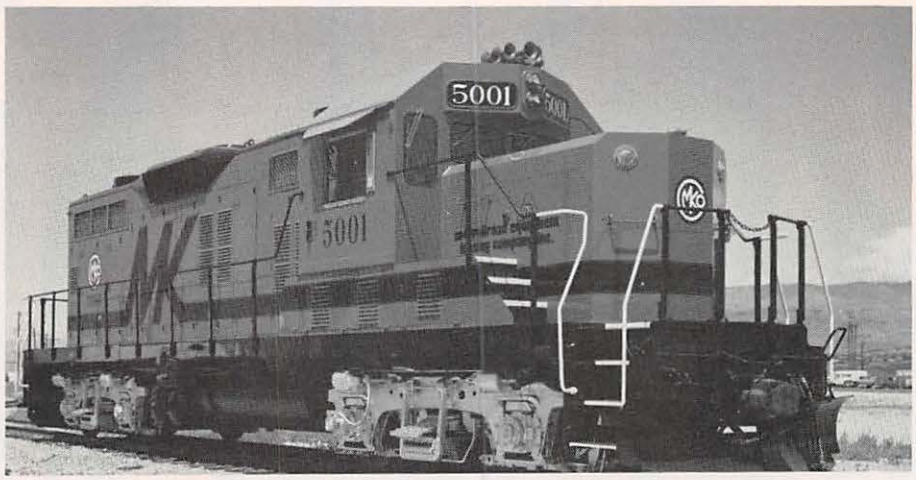
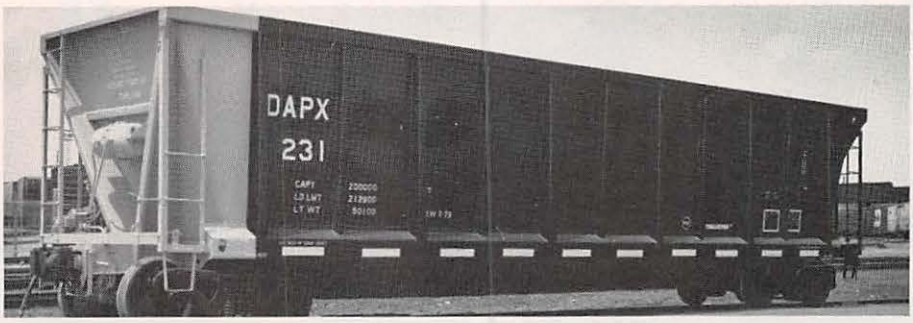
M-K: Sulzer-powered, rebuilt locomotive

On display by Morrison-Knudsen will be the company's TE50-4S, which M-K describes as "a fuel-efficient locomotive, completely remanufactured and powered by a Swiss-made Sulzer six-cylinder diesel engine." Designed for use on short hauls, in yards, and on short lines, the unit will spend its first few months working on the Wabash Valley Railroad under a demonstration lease. The T50-4S designation means the locomotive has a tractive effort of 50,000 pounds, has four driving axles, and employs a Sulzer engine. It is capable of 1,500 traction and 1,640 gross hp.



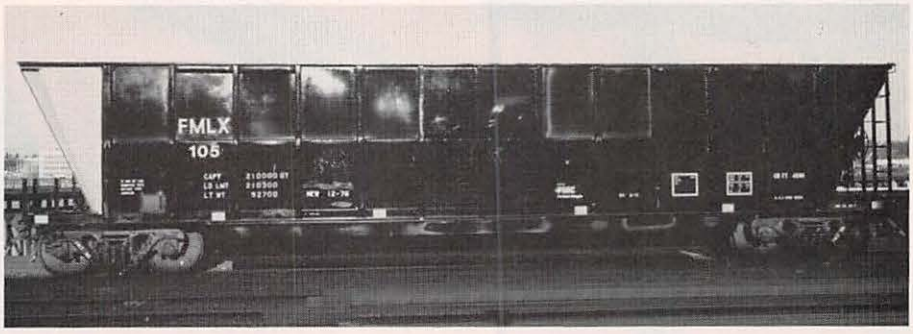
ACF: Coalveyor Gon increases payload

"Research in Progress" will be the theme of the ACF exhibit, which will feature the company's instrumented research car, its line of car parts, and the new Coalveyor Gondola (photo). Coalveyor's basic reinforced circular bottom configuration, says ACF, provides a lighter car weight and thus increases payload.



FMC: Lightweight rotary dump gondola

A dropped center sill contributes to a low center of gravity in the lightweight rotary dump coal gondola that FMC Corp.'s Marine and Rail Equipment Division will exhibit. FMC says the car is designed for high cubic capacity with the strength necessary to endure high-mileage unit train service.



Pettibone to display rerailing crane

The Pettibone Corp. exhibit will feature the Model 220 RRC Rerailing Crane (photo), the Model 250 Rail Car Mover, and the Model R.S. Hydraulic Crane.

NRUC: Max-I-Ride fabricated truck

A free-standing display at the exhibit of National Railway Utilization Corp. will feature the 10,500-pound Max-I-Ride fabricated truck, which has been undergoing testing at Lehigh University's Fritz Engineering Laboratory. NRUC will also have two of its boxcars on display. One will be set up as a theater car and will be showing continuous performances of two slide presentations: One is "The NRUC Story"; the other, "The Making of a Star: The Max Seel Story." A second boxcar will be open for inspection and will contain information about NRUC's suppliers. NRUC's refurbished private car will be part of the exhibit but will not be open for inspection.

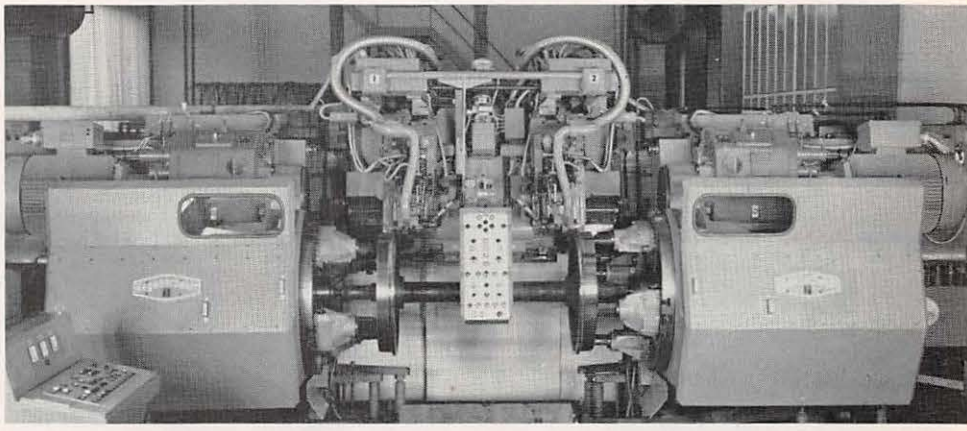
Hoesch to show new rerailing vehicle

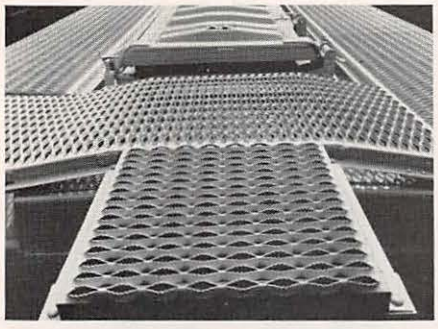
Hoesch America Inc. will exhibit for the first time a new Hoesch Hi-Rail equipped rerailing vehicle, featuring direct power take-off from the vehicle's engine to operate the hydraulic rerailing equipment; a rear mounted 10,000-pound hydraulic crane; compartments to house the hydraulic rerailing equipment; and additional compartments for a generator and welder. Hoesch says the vehicle has enough space to transport a completely assembled freight car truck. Also to be shown for the first time is a Hoesch hydraulic haulage and rescue device. It is designed for pulling apart vehicles when accidents have occurred and also to assist in raising overturned vehicles.

RSA Indoor Exhibit

Hegenscheidt shows wheelset machines

Hegenscheidt Corp. will exhibit scale models of its Underfloor and Overfloor Wheelset Reconditioning machines and its Vertical Turning Lathes for wheel manufacturers and wheel shops. Featured will be the Model 165 HP High Performance Portal Type Wheel Lathe, a relatively new production-proven machine for which Hegenscheidt claims "the highest productivity for wheelset reconditioning available for the railroad industry."





U.S. Gypsum to show railcar safety devices

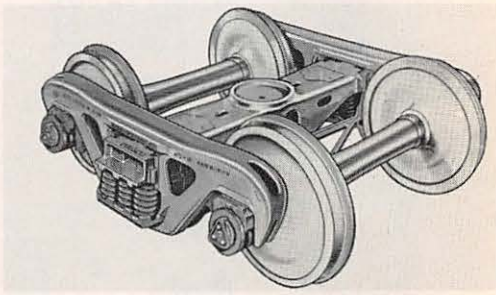
United States Gypsum Co.'s Metal Products Division will have an exhibit featuring four railroad car products: the GRIP STRUT safety grating running boards (photo); GRIP STRUT safety grating brake steps; GRIP STRUT safety grating caboose platform; and the Illumin-Air II automobile rock protection side panels.

Toughness built into new brake beam

The display of Buffalo Brake Beam will highlight the company's New Welded Truss Brake Beam, whose features include a weld filler material with "exceptional toughness," high tensile strength and high impact resistance at subzero temperatures in the as-welded condition. Also to be shown are a complete line of replacement beam parts, underscoring the benefits of beam reclamation; Buffalo Unit Ladders that are used on freight cars; both standard and special freight car sill steps; and the Buffalo brake rod connectors.

ASF to exhibit a trio of trucks

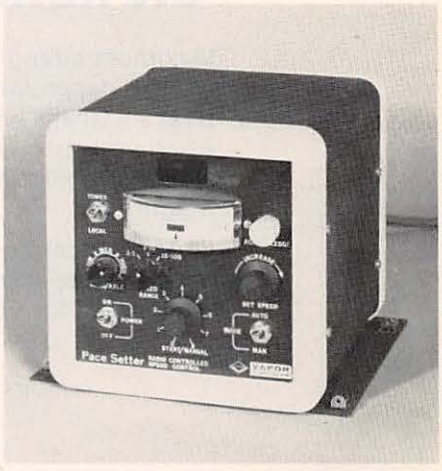
Three freight car trucks will be included in the display of American Steel Foundries. The first is the Ride Control truck (photo), incorporating provisions for nine load coils rather than the customary eight. The second, now ready for revenue test service, is called the Super Service Ride Control; aimed at high utilization service, it incorporates features of the standard Ride Control together with control elements having even higher predicted mileage life. The third is a "steering" truck which ASF has had under development for several years. It passed stability and curving tests at Pueblo, Col., this summer at speeds in excess of 100 mph. While this part of the exhibit



will be expository and will not include final hardware, ASF expects to go into revenue tests with this truck in the comparatively near future. Also on display will be a Ride Control bolster incorporating cast-in wear-liners, now going into revenue test service. ASF says it should add to the life of Ride Control trucks at modest cost.

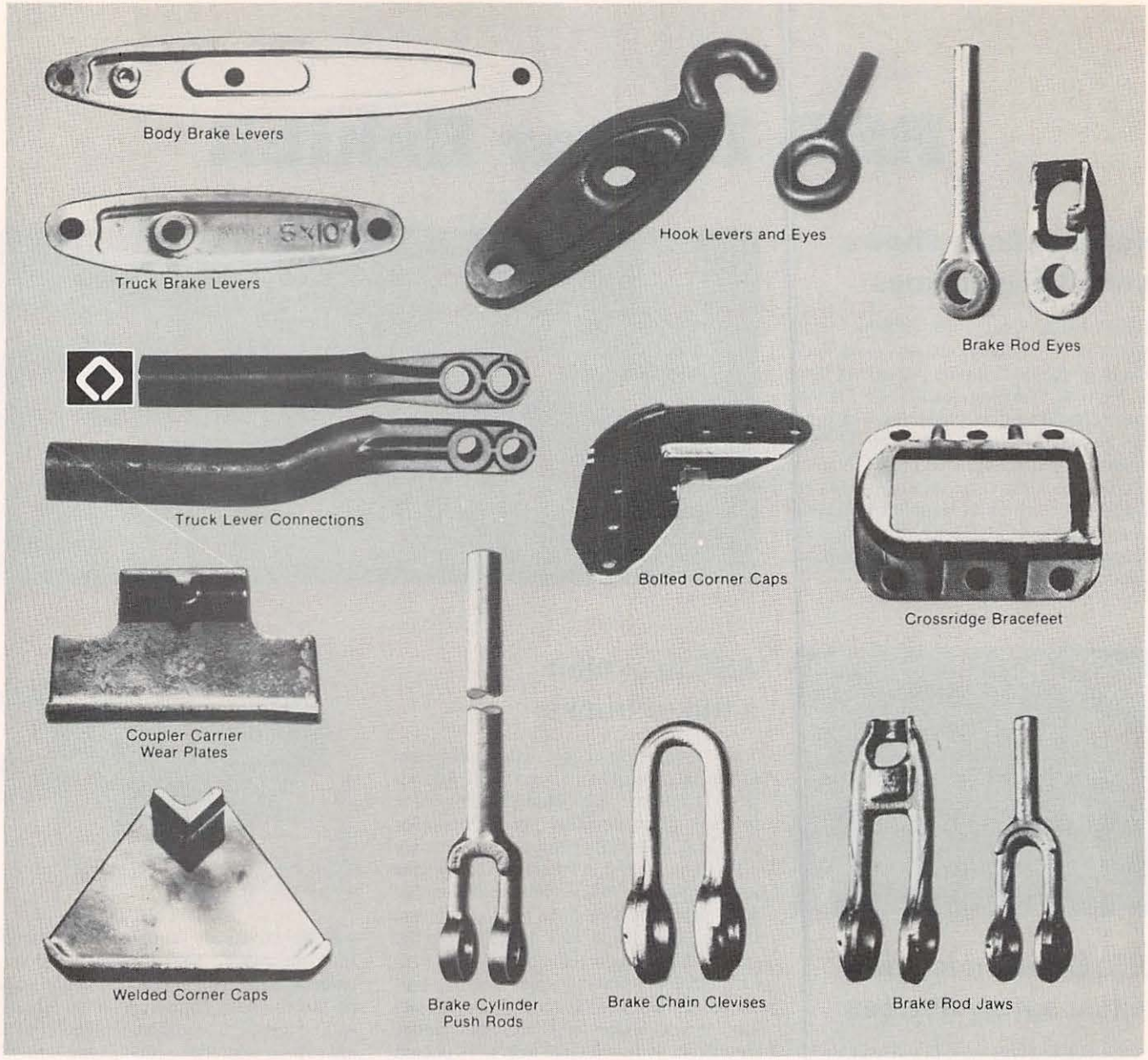
Vapor focuses on fuel-saving controls

Vapor Corp. will exhibit a number of energy-saving control systems. Featured will be the Pace Setter DM (Dual Mode) speed control (photo) which permits locomotive speed control during downgrade loading without the use of air brakes, and which makes plugging possible at speeds below 1 mph. Also shown will be the Positive Traction Control system (PTC) which improves locomotive adhesion capability and achieves higher tractive effort under varying track conditions allowing substantial increases in tonnage ratings. Other products will be Vapor's Fuel Conservationist, which keeps locomotives in road-ready condition without idling, and Train Operations Recording (TOR) system, which makes monitoring



and evaluation of train operations possible for specific segments or the entire system of a railroad.

(Continued on page 60)



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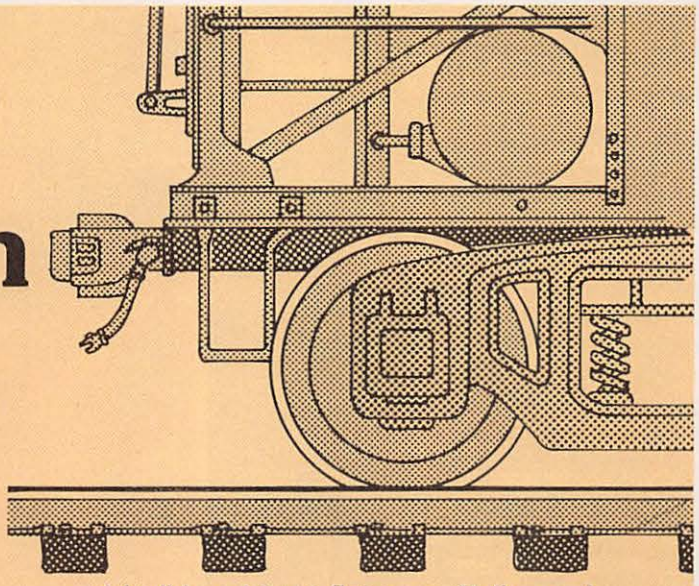

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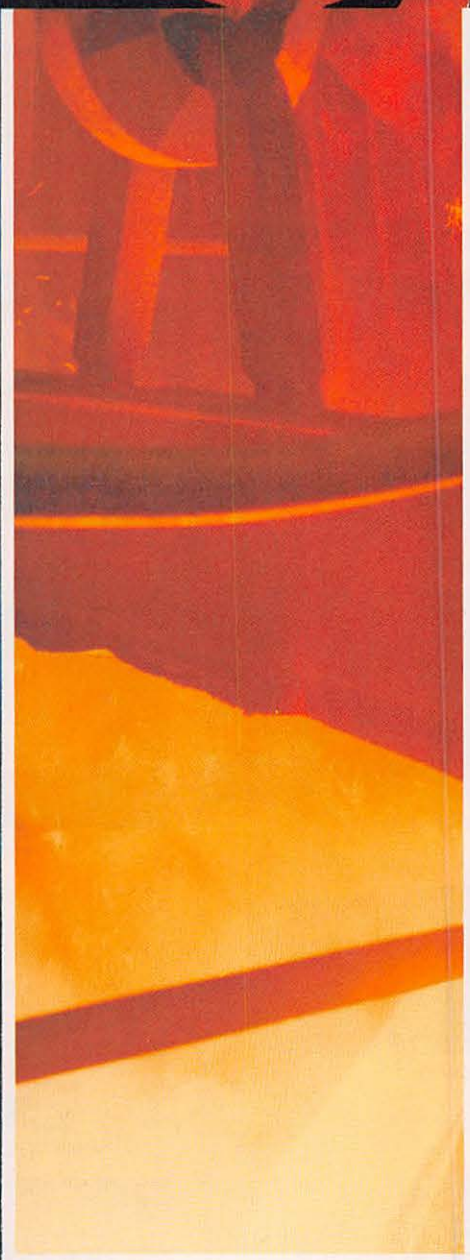

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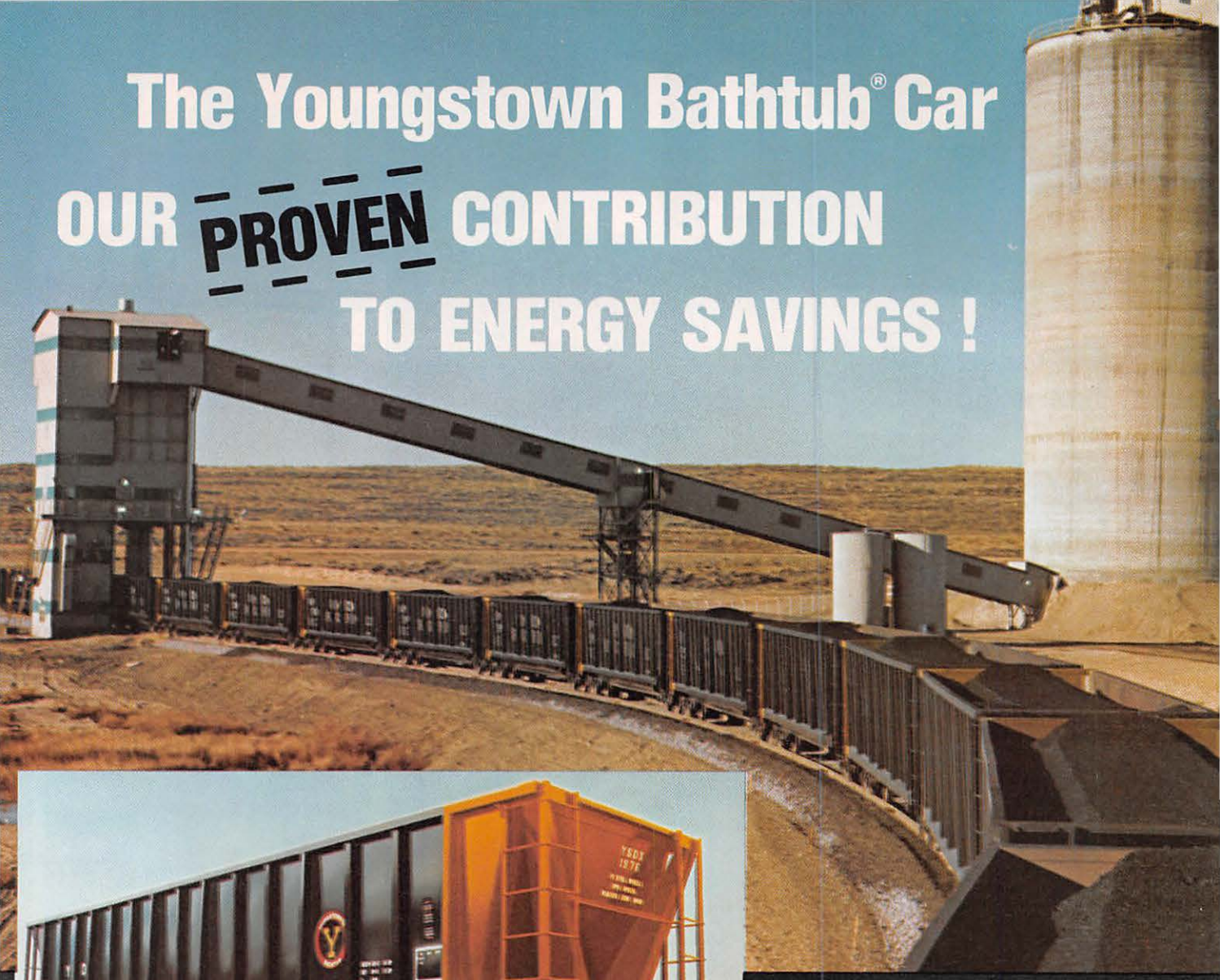

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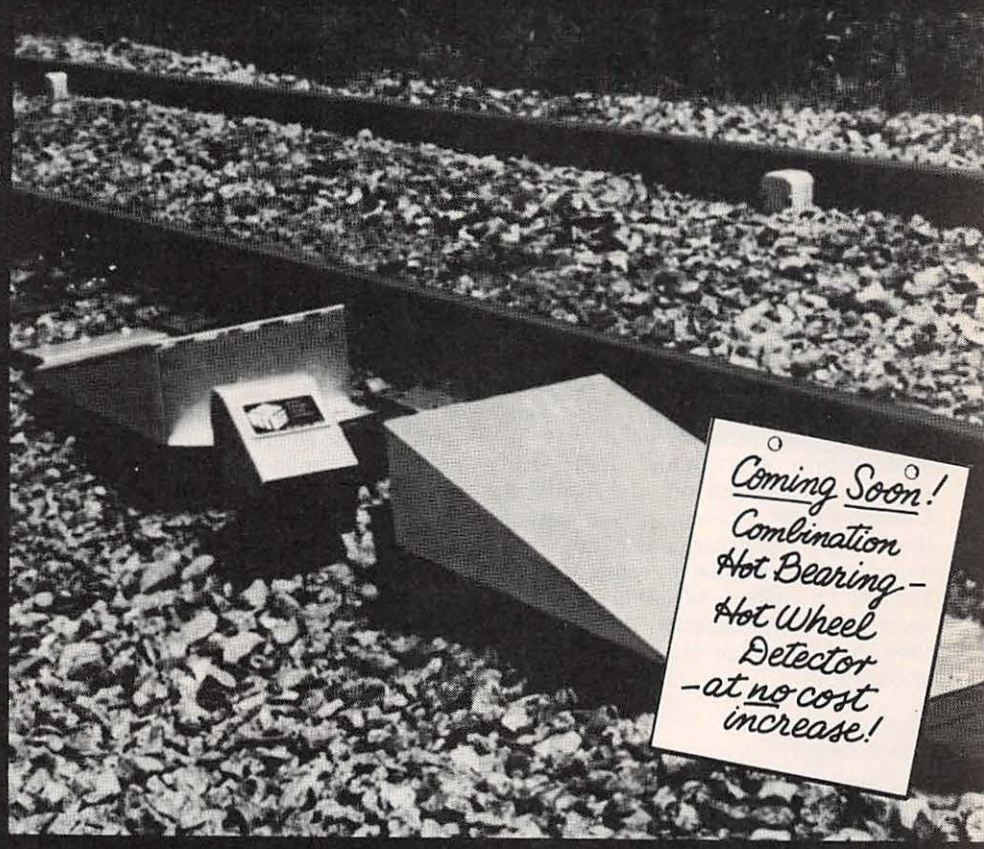

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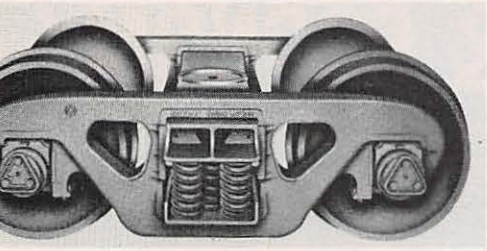
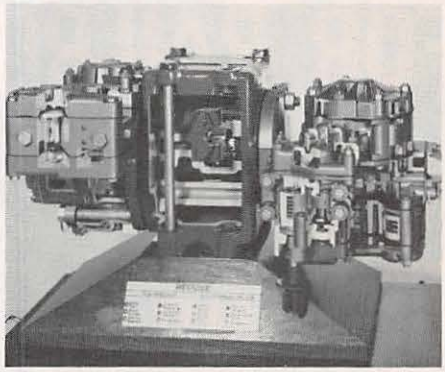


National Castings: Swing Motion Truck

Among the products to be shown by National Castings Division, Midland-Ross Corp., is the Swing Motion Truck, which is said to effectively eliminate the problems of hunting and car roll. Also to be exhibited are the Rotary "F" coupler, and a variety of draft gears. Wine Railway Appliance products on display include hopper door frames, locks, and hinges. Focal point of the National Castings exhibit will be display models of the company's expansion plans. One model will show what is being done at Sharon, Pa., where $8 million is being spent to increase capacity. Another will show the $18-million expansion planned at Cicero, Ill.

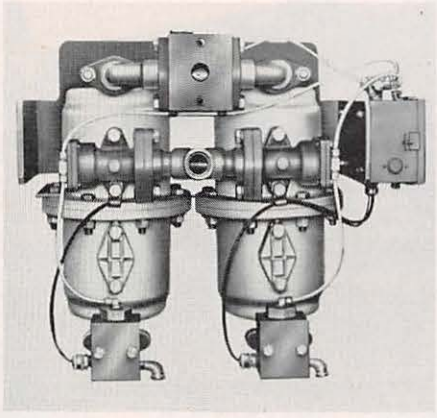
Stucki to demonstrate hydraulic testing

A. Stucki Co. will exhibit hydraulic stabilizers for control of freight car harmonic rolling and vertical bounce, as well as standard roller side bearings and resilient side bearings designed to control truck hunting. Actual testing on the exhibit floor will be performed by a hydraulic test machine (photo) that has been designed to measure force levels and damping characteristics developed by Stucki stabilizers.



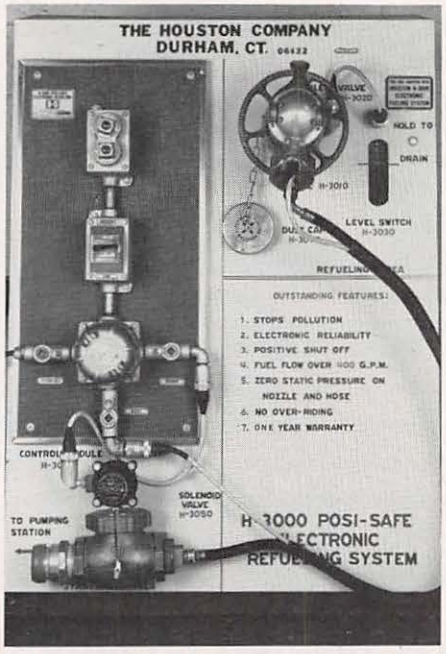
Westcode: Freight Brake Control Valve

Westcode will exhibit its line of transit brake and door equipment along with freight brake equipment, featuring the Z1AW Freight Brake Control Valve. Westcode claims design advantages for the Z1AW that deliver smoother, more predictable operation, particularly in cold weather. Extensive use of aluminum die castings makes this control valve 49 pounds lighter than other existing equipment and contributes to its easy maintainability.



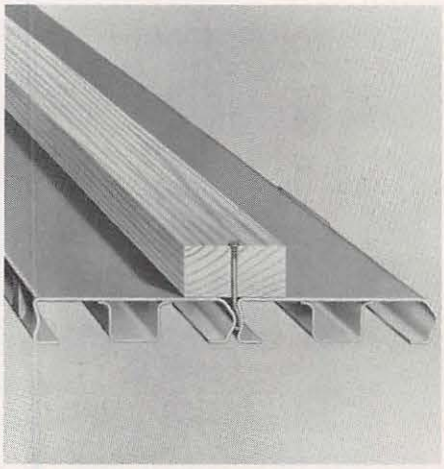
WABCO air dryer to reduce freeze-ups

WABCO's Westinghouse Air Brake Division will introduce a new air dryer for use with freight train compressed air systems. The D-2-B dryer, which is installed on locomotives, features the regenerative desiccant method of lowering moisture content of the compressed air in train lines which aids in avoiding freeze-ups in cold weather and in extending cleaning periods. WABCO says it has determined that the regenerative desiccant method is the most economical and functional alternative to the refrigerant system and deliquescent medium-type dryers.



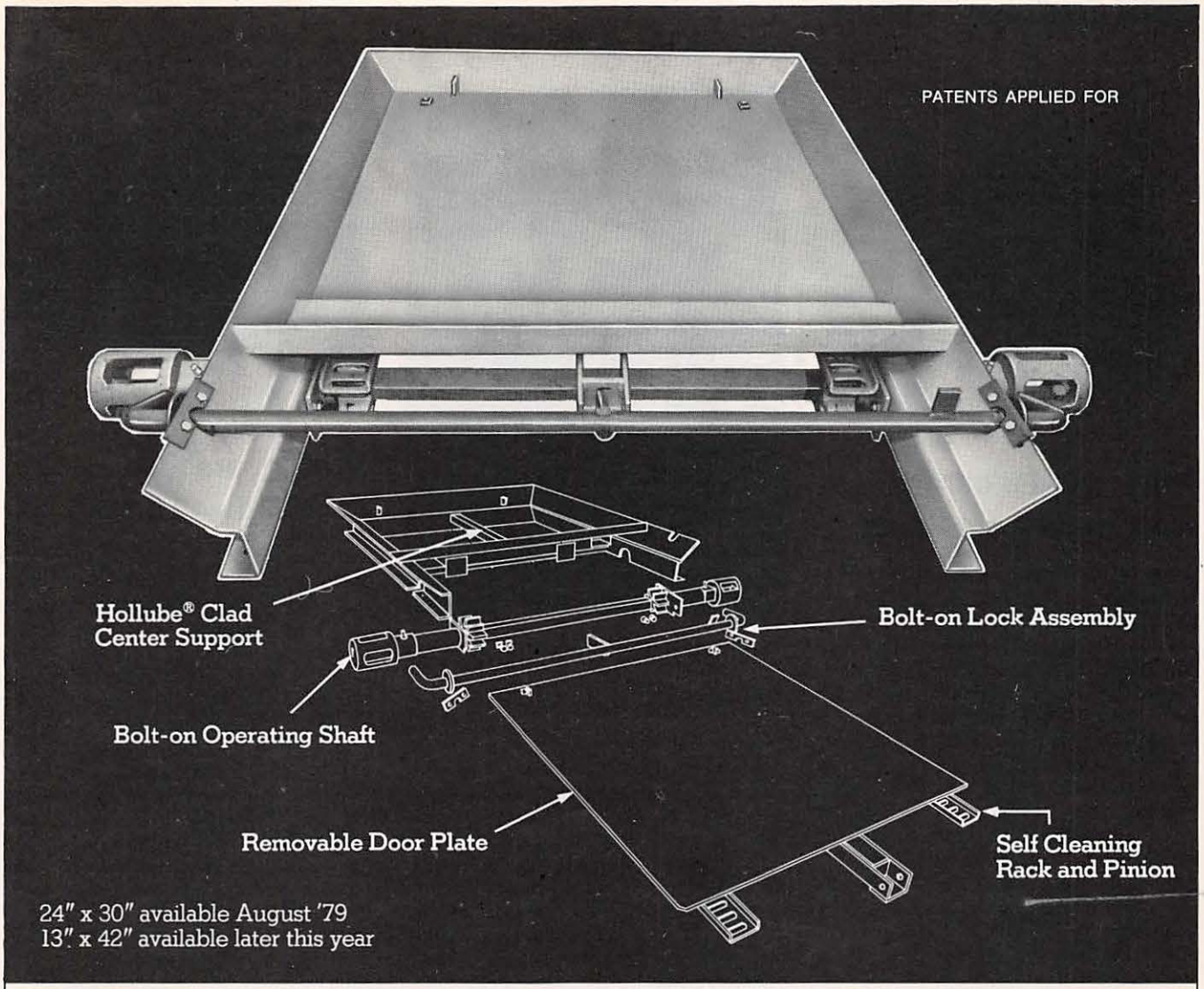
Refueling system saves diesel fuel

The Houston Co. exhibit will be devoted entirely to its H3000 Electronic Refueling System, featuring a large display board, which explains the fuel-saving, spill-proof system. Also to be shown are a scaled down model of the Houston Boom and a slide presentation.



New from Abex: Nailable steel flooring

The Railroads Products Group of Abex will show a variety of wheels, brake shoes, adapters, and other truck parts, plus the company's line of Stanray products such as roofs and ends. One exhibit will feature the traction-motor repair capability of Chandeysson. Among new products on display will be the computer-designed Southern Wheel, which is to be manufactured at a $78-million plant now under construction; nailable steel flooring (photo); locomotive water coolers; and improved uncoupling devices.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Entire gate can be assembled with an adjustable wrench.

Holland's new lightweight outlet gate was designed to be the most easily maintained and repaired gate on the market—one that will cut labor costs and keep cars in service.

That's because its major components are very accessible and simple to replace, including the shaft and door plate. The gate's bolt-on parts can be replaced on any rip track with an adjustable wrench. No welding or special tools required.

Easy Operation.

One unique feature is the Hollube® clad center support. This component makes the gate easier to open because (1) it supports the weight of the load and prevents the door from bowing and (2) the gate slides easily on the Hollube surface, which has a high built-in lubricity.

Low Maintenance

The new gate was designed to operate for long periods of time with little maintenance. There is no buildup of roadbed dust and lading since the door plate racks are self cleaning and nothing will adhere to the center support's Hollube surface.

10-Day Delivery

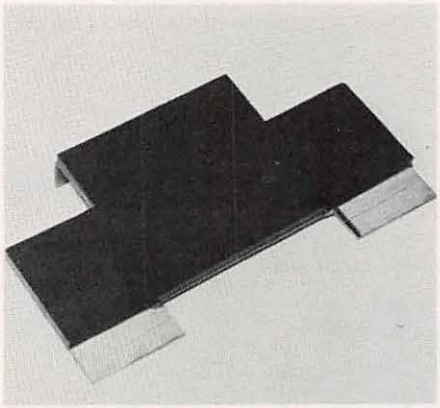
To avoid the long lead times that are common now, we are building a large inventory of gates and replacement parts. Under present conditions, delivery will be made in 10 days.

For further information contact:

R.F. Murphy, V.P.
Holland Company
1470 N. Farnsworth Ave.
Aurora, IL 60505 • (312) 851-8200

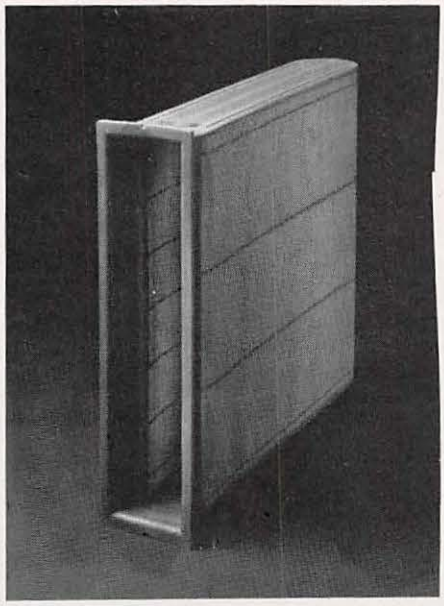
HOLLAND COMPANY

Circle 29 on Reader Service Card



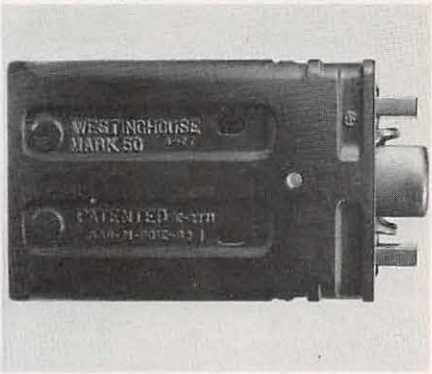
New coupler carrier wear plate from Dayco

A new coupler carrier wear plate offered by Dayco Corp. can be installed in one-tenth the time with less than half the labor previously required, without using heavy equipment or disassembling the coupler carrier. The coupler is simply raised manually, the Mor-Lok wear plate slipped in through the back of the carrier, and the specially designed tabs hammered down securely. Once tabbed down, the plate will conform to variances in coupler carrier dimensions. Custom made for coupler carriers of any size or shape, the company's wear plates consist of soft steel mesh reinforcement encapsulated by Duraguard, a UHMW polymer that retains toughness at temperatures from -65° to 185°F.



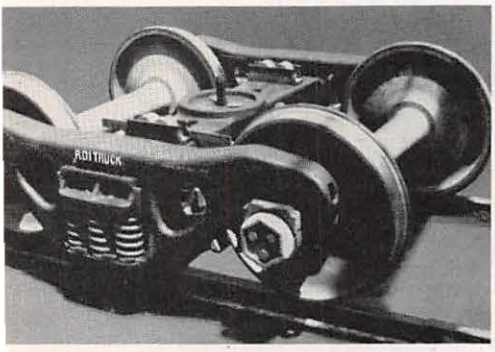
Donaldson to introduce locomotive air filters

Two new locomotive air filters will be introduced by Donaldson Co.: the U-Pac engine filter (photo) and the Strata Panel inertial filter. The U-Pac is a dry-type filter designed to replace fiberglass engine filters that use oil in the filtering media. Strata Panel is Donaldson's new concept in locomotive carbody separators. An inertial air filter, it is said to maintain high efficiency without cleaning between major overhauls.



Draft gears lead the Cardwell lineup

Cardwell Westinghouse will display three product lines: draft gears, hand brakes, and slack adjusters. The Mark 50 (photo) draft gear features unique friction clutch design with wear liners to ensure housing integrity and allow economical reconditioning. Other draft gears shown will be the Mark R500 rubber-friction model, the Mark H-60 spring-actuated friction clutch, reconditioned units, and the one millionth Mark series draft gear to come off the production line. A new product group of Universal Railway Devices thin-line, lever-type hand brakes and wheel-type units will also be on display, as well as the Universal 2300-DJ Model slack adjuster, which lengthens or shortens automatically to adjust to degree of brake shoe wear.



Railroad Dynamics: A new truck design

Railroad Dynamics, Inc., will introduce a new truck design that is said to provide a nonhunting mode up to speeds of 75 mph. RDI says this is accomplished through the use of split angular friction wedges. The design utilizes the current standard three-piece AAR truck with slight modification of the truck bolster. The RDI Truck is available in 70-ton and 100-ton capacity applications.

Barco system tapes locomotive speed

Barco speed information systems, Barco electronic transition control, and air brake equipment replacement parts are among the railroad-related products to be shown by Aeroquip Corp.'s Gustin-Bacon division. The SIS 800 speed information system indicates locomotive speed and provides a taped record of speed performance. The SIS 400 recorder connects with the SIS 800 control module to record as many as eight additional operations such as braking, throttling, and ATS acknowledgements. The Barco electronic transition control provides speed-actuated control of locomotive transition in a compact package. The system features plug-in circuit boards and built-in back-up circuits to protect locomotive electrical equipment in the event of control malfunction.

FreightMaster exhibit will star Quick-Car

FreightMaster's exhibit will highlight the company's newest service, Quick-Car, which is described as "an innovative approach to car maintenance and wreck repair . . . primarily geared to contract service for unit trains." All standard repair and maintenance capabilities will be incorporated into Quick-Car operations. Quick-Car adds a management-oriented concept to the usual car repair services. Application of computer-assisted information development and car-use tracking will be utilized to plan and execute Quick-Car services to help maximum car utilization. FreightMaster will also exhibit the company's line of hydraulic end-of-car cushioning devices and the Train Dynamics Analyzer system.

(Continued on page 66)

O-B can convert electric power into motive power

Catenary installations
custom designed for specific applications

It takes healthy chunks of design and manufacturing know-how to supply and to apply a dependable system to convert electric power to motive power.

As a leading manufacturer of insulation and hardware uniquely adapted to catenary construction, Ohio Brass has served the railroad industry for over 86 years. Furthermore, O-B transit engineers have accumulated equal years of experience in design and specification of insulation and support for catenary used in mainline railroad electrification.

Whether you are planning a new overhead system or modernization of present installations, O-B transit engineers are prepared to render capable engineering assistance . . . contact your O-B representative and discuss your future system with him now.

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OHIO BRASS

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Corbin's WABCO's Kentucky

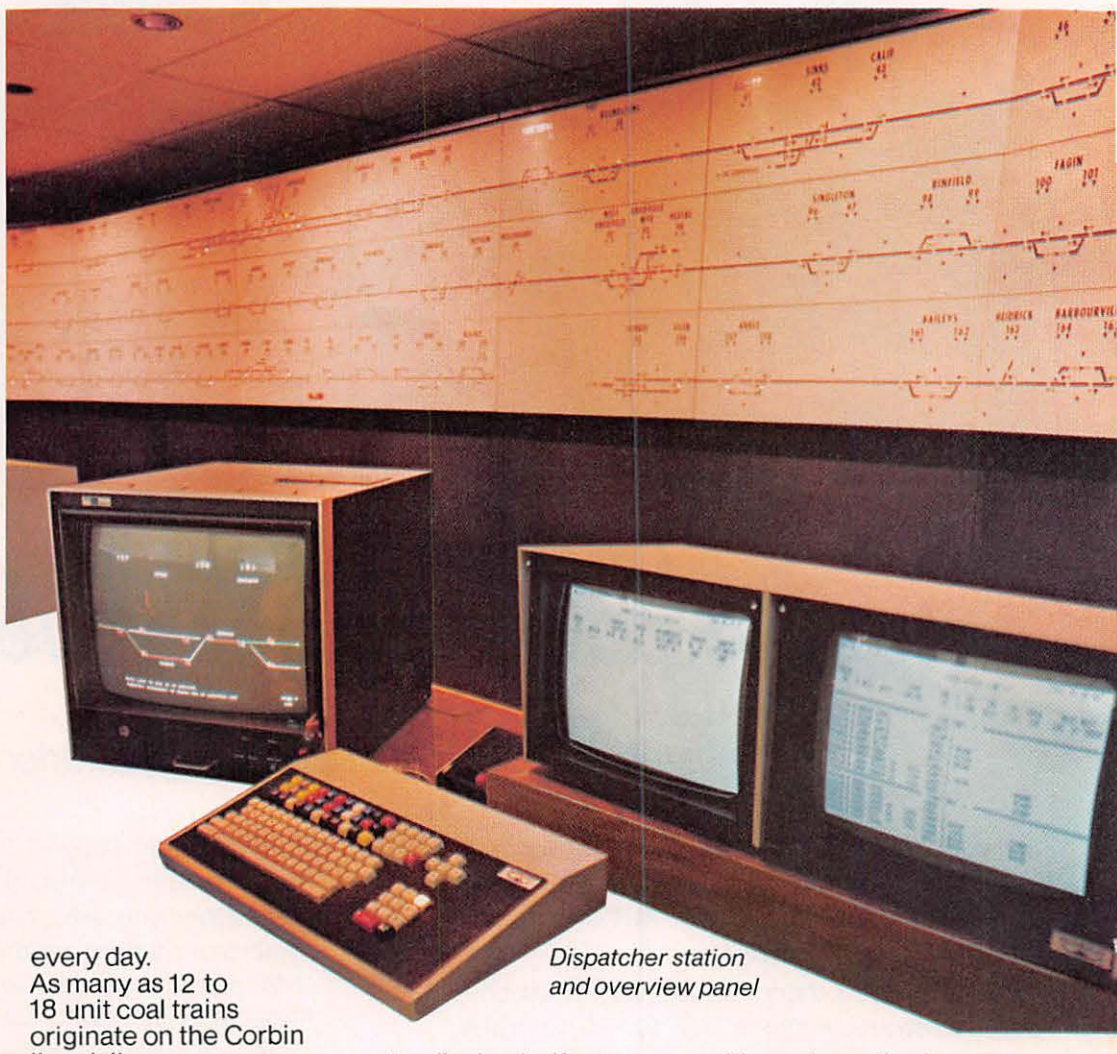
The L&N's use of Computer-Aided Dispatching helps boost economy and efficiency at Corbin.

WABCO's CAD (Computer-Aided Dispatching system), designed for the busy Louisville & Nashville coal-handling Corbin Division, is a product of careful breeding.

That breeding has helped boost Corbin's operational economy and efficiency. More traffic is being controlled with fewer dispatching and clerical people, and the flow of information concerning train movements has speeded up.

In addition, Corbin will provide an improved car usage cycle and train running time, and achieve more effective use of track maintenance crews. It all adds up to manpower savings, engine savings, car savings, and improved railroad shipper service.

The Corbin Division combines four former operating divisions already equipped with CTC, into more than 560 miles of signalled and 560 miles of non-signalled territory. Each month Corbin handles over 60,000 car loadings, with more than 220 loading points. Two hundred and thirty diesel-electric locomotives must be coordinated every day. As many as 12 to 18 unit coal trains originate on the Corbin line daily.



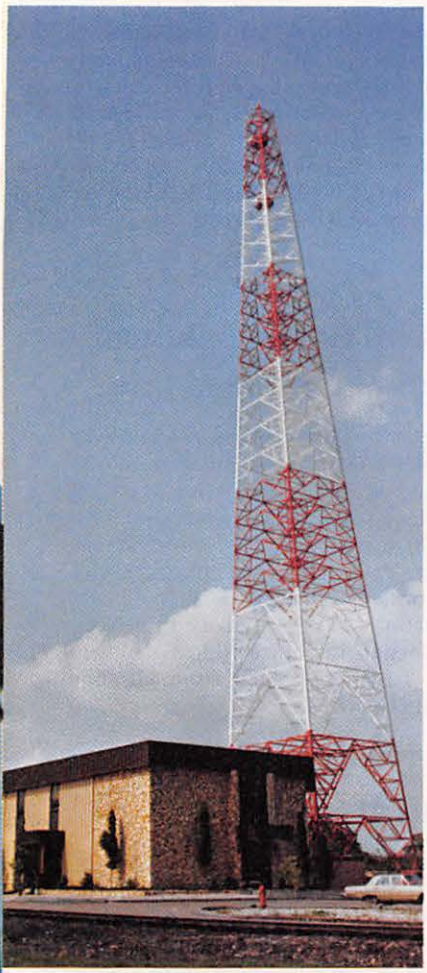
Dispatcher station and overview panel

To control and supervise these and other train operations efficiently and economically, the L&N selected WABCO's CAD.

The heart of the Corbin system is a pair of data-linked computers which operate on a hot-standby basis: if one fails, the other automatically takes over.

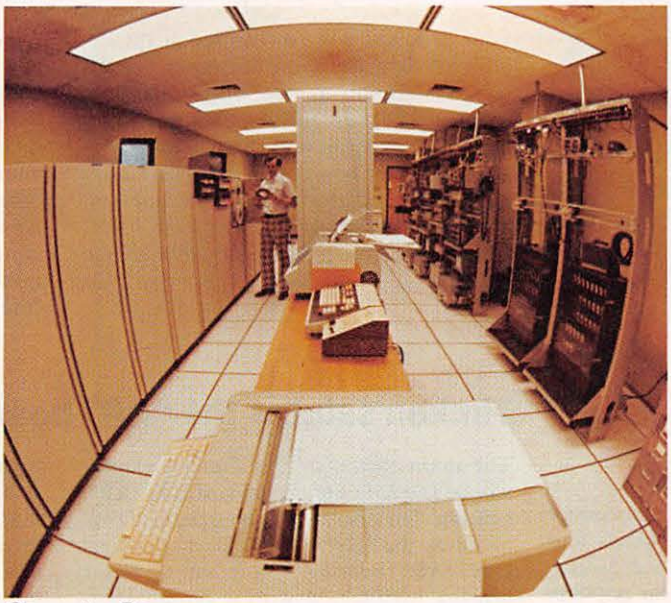
Although the computer automates control and clerical functions, skilled dispatchers still call the shots. Each of the three dispatchers' positions is equipped with a color cathode ray tube (CRT) unit, two black and white CRT's, a functional keyboard and a communications console. An overview display panel provides the dispatchers with a view of the total system. The color CRT provides detailed graphic views

CAD. Thoroughbred.



L&N Operations Facility, Corbin, KY

Operations Room



Computer Room

of pre-defined track sections and enables interaction with the signal system. Both black and white CRT's use guide formatted interactive data entry and retrieval techniques. They also allow dispatchers to review a variety of train status reports and to enter data for train orders, slow orders and other special instructions. The keyboard permits quick entry of information and manual intervention as needed.

The Corbin CAD system performs three major operations.

The *Manual Centralized Traffic Control* gives each dispatcher complete manual control over his territory. For added safety, the dispatcher's keyboard requires that areas of control be preselected and displayed.

Computer-Aided Control, the second CAD function, automatically controls train tracking and meet and pass determinations; and coordinates signaling and switching.

Another important operation, the *Dispatcher Information System,* increases efficiency by automating the processes of train sheet and train order handling, train logging, clearance and other clerical functions.

CAD also interfaces via a microwave link to a Management Information System at the Family Lines' headquarters in Jacksonville, Florida. This, in turn, is microwave-linked with L&N's data center in Louisville, permitting interface between the Corbin dispatching center, remote data entry points and the railroad's central data control system.

Let WABCO put you in the winner's circle. We can design a CAD system that can do this for *your* railroad. Write: **Union Switch & Signal Division, Westinghouse Air Brake Company, Swissvale PA 15218.**

WABCO

An **American-Standard** Company

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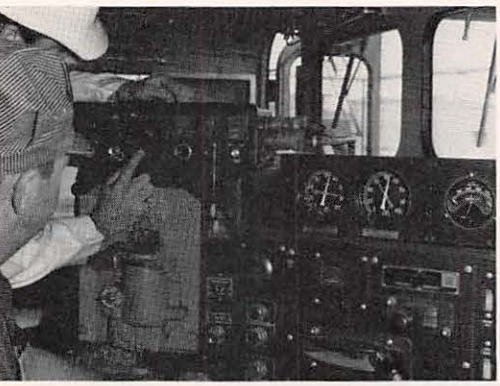
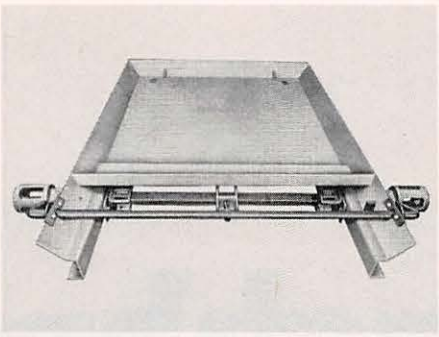


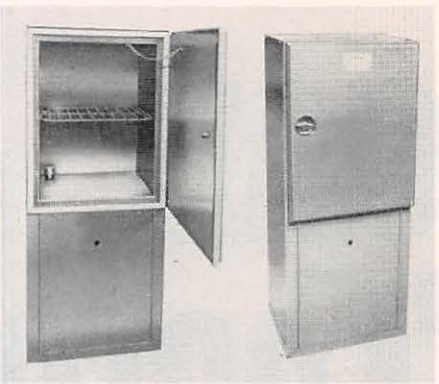
Harris: Remote control of distributed power

Harris Controls will show its Locotrol equipment for remote control of distributed power in long unit trains. On the market for about 15 years, Locotrol is presently in use on most major railroads in the U.S. and is also being operated by railroads in Canada, Australia, and Algeria.



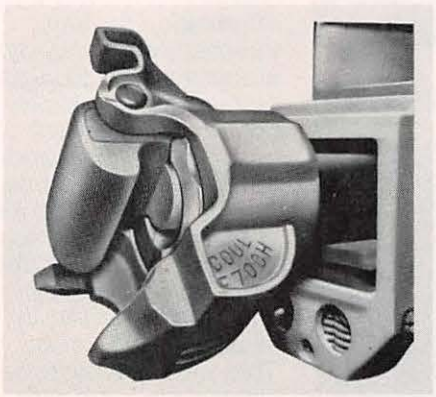
Holland will show new outlet gate

Holland Co.'s Freight Equipment Division will display a new outlet gate designed for easy maintenance and repair. A feature of the gate is the Hollube clad center support which makes the gate easier to open because (1) it supports the weight of the load and prevents the door from bowing and (2) the gate slides easily on the Hollube surface, which has a high built-in lubricity.



Cleveland Technical Center: Vortacool line

Cleveland Technical Center will show its line of air-operated Vortacool water coolers and refrigerators. The refrigerator unit has no moving parts, no refrigerant to leak, and is said to be virtually impervious to shock and vibration. A production model VR 250, a 2.5-cubic-foot refrigerator, will be featured.



From Dresser, a new rotary coupler

Four products will be featured at the exhibit of Dresser Transportation Equipment Division: a new rotary coupler (photo); the new Hydra-Cushion II; a new cast draft sill; and the DR-1 steering assembly. The new coupler, says Dresser, incorporates a design that confines all motion to within the coupler head itself, with no interfacing parts to restrict free rotation.

General Battery shows newest in unitized line

On display by General Battery will be the new 16UB2700, newest member of the company's unitized battery line. It is 33.9 inches long, 26.9 inches wide, and 19.6 inches high to accomodate those battery compartments that have physical size limitations. The tray is of high impact construction and has covered intercell connectors to minimize shorting of terminals. It can be raised from all four sides with a fork lift.

Lamson & Sessions: Fastening systems

Lamson & Sessions Co. will introduce two new fastening system products and feature the Una-Driv one-sided-drive fastening system for various car applications. On display will be the new Lamson & Sessions bolts for both 70- and 100-ton Stucki side bearing cages, a new car decking Una-Driv fastener, and the Rai-Lock 9 track-fastening system. Company representatives will demonstrate driving the one-sided Una-Driv fastening system, which is used in a variety of car assembly installations, ranging from center plate and hopper applications to safety rails, side and end sheets, and roof caps. A track assembly with the Rai-Lock 9 track fastening system will also be shown.

Timken salutes the "AP" bearing at 25

The main theme of the Timken exhibit will be the 25th anniversary of the "AP" bearing. On display will be what is designated as the "1954-1979 Silver Anniversary 'AP' Bearing"—a rotating silver bearing highlighted with a ceiling spotlight. Other portions of the exhibit will cover the "XP" bearing, designed for high-mileage, 100-ton freight car applications; the "AP" bearing family, consisting of eight display models; a Class GG locomotive bearing with housing display; and a model of the "Four Aces" locomotive, America's first locomotive with tapered rolling bearings on all its axles.

Brake beams resist vibration, fatigue

Brake beams designed for "maximum brake loading conditions and resistance to vibration and fatigue" will be exhibited by Chicago Brake Beam. They come in two types; Hanger type, with rigid RH or LH interlocking truss and upset strap tension members; Hangerless type, whose reversible interlocking truss and upset strap tension member can be converted to RH or LH. Interchangeable brake heads can be replaced without interfering with the truss assembly.

Duraguard® protects steel better than steel

in Dayco Coupler Carrier Wear Plates, Center Plate Liners and Draft Gear Wear Plates.

In actual use, Duraguard has shown to have four times the abrasive resistance of stainless steel.

Duraguard is an ultra-high molecular weight (UHMW) polymer reinforced with soft steel mesh.

Ten years of extensive field use prove coupler carrier wear plates made with Duraguard virtually eliminate wear on expensive steel mating parts. The unique properties of Duraguard are also available in draft gear plates and center plate liners.

Duraguard reduces maintenance costs.

Duraguard saves money in terms of replacement time, lost usage time and lubrication . . . in addition to the high cost of parts.

In use on coal unit trains of 100-ton hopper cars, Duraguard center plate liners had not changed in appearance—and only slightly in measurement—after one-half million miles. Despite this rigorous application, the center plate and bolster bowl showed no signs of wear.

Use Duraguard with confidence.

Since the 1920's, Dayco has developed the V-belt type under-car drive, the patented caboose drive arrangement and many other plastic and rubber products for the railroad industry.

Today, Dayco holds over 600 patents and has over 45 patent holders on its research and engineering staff.

We would appreciate the opportunity to discuss your needs, and ask you to call our Railway Representative at 513/226-5855. Or write: Dayco Corporation, Dayflex Company, 333 West First Street, Dayton, Ohio 45402.

Molded under extreme heat and pressure, the UHMW polymer encapsulates the steel reinforcement to form a rugged unitized construction. The steel reinforcement eliminates cold-flow implements electrical continuity.

Only Dayco Duraguard center plate liners, draft gear and coupler carrier wear plates ("E" and "F" design) are reinforced with steel. Available for standard or special dimensions.

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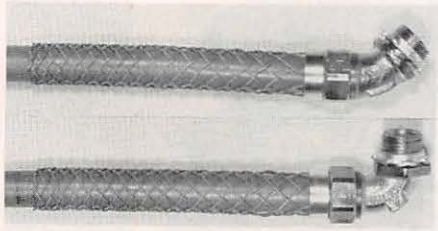
Systems Suppliers Exhibit

NETCON-5 system to be demonstrated

General DataCom will demonstrate its NETCON-5 network diagnostic and control system with an on-line display of Norfolk & Western's data communications network. A crt in the General DataCom booth, installed in parallel with the NETCON-5 system in NW's Roanoke, Va., office, will display a wide range of monitoring and control functions as data flows through the railroad's far-ranging network.



Cord grips featured in Kellems exhibit

Products to be shown by Hubbell's Kellems Division include the company's Deluxe Cord Grips, for cord and cable under heavy strain. Stainless steel mesh with a water and oil-tight connector relieves tension at electrical terminals and controls the arc-of-bend of the cable.

AT&T to feature Horizon System

The Horizon Communications System will be featured at the display at the Bell System, AT&T. A number of other voice and data communications products will be included in the Bell System exhibit.

Three new chargers in LaMarche display

LaMarche Manufacturing Co. will exhibit three new field-tested chargers. The completely automatic, solid state, constant voltage chargers feature ac line voltage regulation, current limiting, and long-life silicon diodes. The new LaMarche A25F and A56 track chargers are said to provide improved performance without sacrificing safety and long life. The new LaMarche A40 crossing chargers are designed for heavy highway-crossing system loads.

Three cables included in Okonite exhibit

Okonite Co. will feature its DF (damage free) Railroad Signal cables with Shock Absorbing Cushion; DF Railroad Signal and C-T-C Cables with Pull Cord Splicing and Terminating feature (photo); and LII (low inductive interference) Cables for installation in rights-of-way.

ADT system reads car numbers at 70 mph

ADT Co. will demonstrate its freight car identification system, which records information on the sides of cars moving at speeds up to 70 mph under all kinds of light and weather conditions. The system was recently installed on the Houston Belt & Terminal, where it will track an average of 180,000 cars a month. A similar system on CP Rail in Toronto has been in operation since June 1, and systems are being installed in Chessie's Queensgate Yard in Cincinnati and CN Rail's Taschareau Yard in Montreal.

SES offers data on solar power

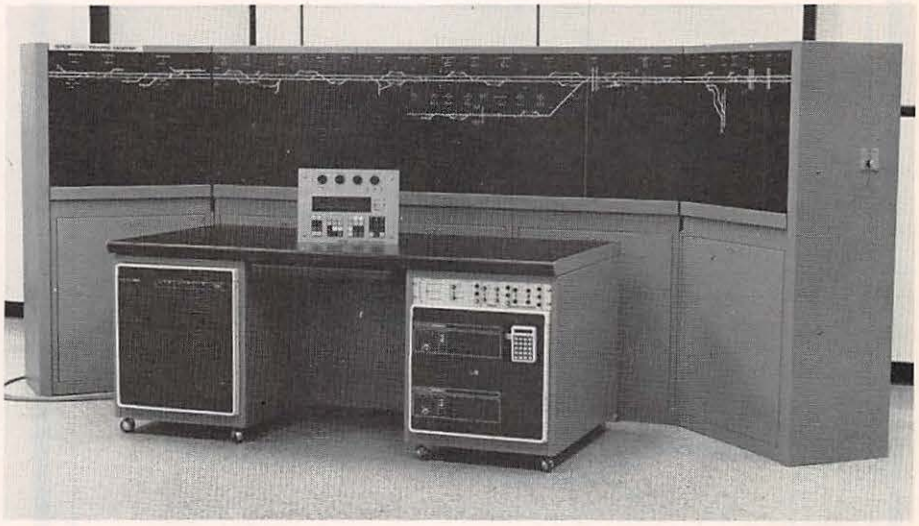
The SES, Inc., display will feature solar-electric panels that, when used in a remote area, provide reliable power for radio repeaters, microwave transmission systems, block signals, grade crossing signals, and hotbox detectors.

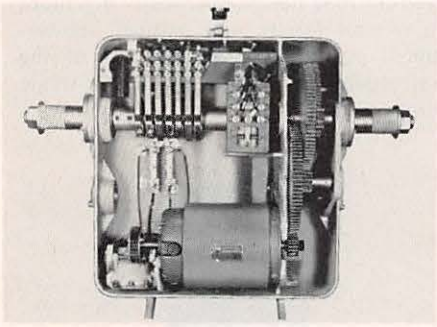
Farinon: Multiplex and microwave

Featured at the Farinon Electric exhibit will be a multiplex system, LD-G, tailored for short-haul/light-density needs, and a microwave communications system for 300, 480, or 600 voice or data channels in the 1950-1990 MHz bnd. The LD-G multiplex system can be expanded to 312 channels in 6-channel-subgroup increments. The FL1-2 Microwave Radio is for operational fixed applications and incorporates many design and performance features found in the Standard Farinon microwave systems.

GRS to exhibit three new products

General Railway Signal will introduce three new products at its exhibit: (1) A Micro Traffic Master control system that eliminates the large equipment racks and code stepper units of conventional control offices. All office logic is contained in microprocessors housed within or near a desk-like console. (2) A family of Genralogic microprocessors that replace complex systems of nonvital relays and office code units. The processors are made of standardized plug-in circuit boards; they are housed in rack-mountable modules that can be installed in GRS traffic control consoles. (3) A wheel presence detector that detects wheels at speeds down to 0 mph. The detector has no moving parts or electronic components in the encapsulated, rail-mounted unit; a supporting electronic unit is housed in a nearby foundation-mounted junction box. Other products to be featured at the GRS exhibit include the GRS Speed-Frater electric switch machine for yards, and GRS Type F5 retarder for hump, group, and tangent point service.





WCH: Working model of gate mechanism

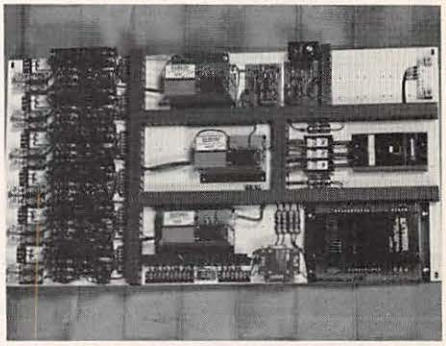
The Western-Cullen-Hayes display will feature a working model of the 3590/93 Series Gate Mechanism. WCH says it also will introduce several new products.

New two-way radios are in GE display

General Electric's Mobile Communications Division will display its MASTR two-way radio systems and equipment plus hotbox detection systems. The GE two-way radio line will feature two new products—the MPR Personal radio and the Century II Mobile/Base radio. Other GE communication equipment on display will include MASTR II, Executive II, and Custom MVP Mobiles plus the MASTR Personal Series and Porta-Mobile II.

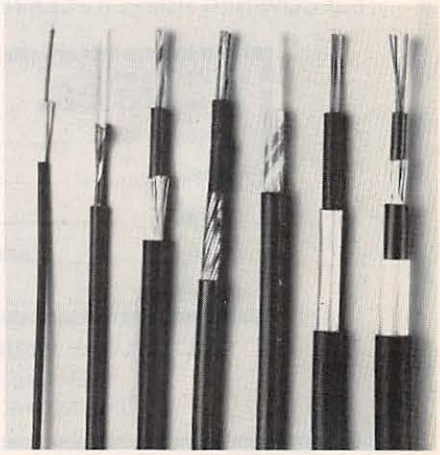
Extron: Energy-saving switch-heater control

Extron's display will feature the company's Extemp switch-heater control, which it says is "the only heater control available which has the energy-saving, temperature-proportional, modulated output." A fully operational Extemp control with four-switch capability (photo) will be shown, as well as a control with six-switch capability. Also included will be Extron's "pan heater," which is used to keep switch rods free of ice and snow; a signal relay surge protector; and the company's new tubular rail heaters.

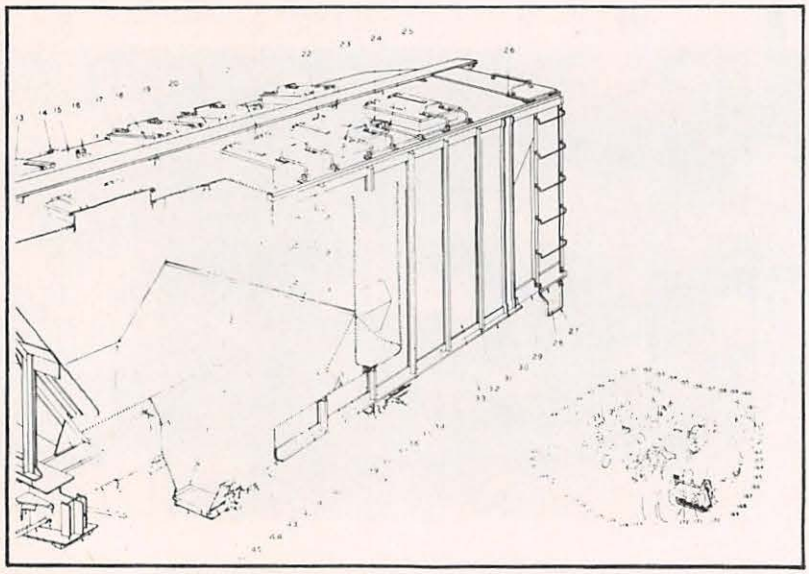


Optical fibers features by General Cable

General Cable will devote its exhibit to optical fiber cables. A technical paper describing an optical fiber cable installation on the Union Pacific will be available to visitors. The one-mile self-supporting Figure-8 aerial cable installed by UP in its Denver yards provides interference-free video signals for car identification. General Cable also designed and manufactured the 5.6-mile interoffice cable installed by the General Telephone Co. of California in the world's first lightwave transmission system to provide regular telephone service to the public. Another of the company's optical fiber cables carries high-speed data for NASA and the Air Force.



CAR CHARTS



Clear, Detailed Views Show All Principal Parts

- ☐ MODERN BOXCAR 50'6" Cushion Underframe. 22x35
- ☐ ALL-PURPOSE FLATCAR TTX TOFC/COFC. 23x35
- ☐ GONDOLA CAR 100 Ton. 23x27
- ☐ MECHANICAL REFRIGERATION CAR. 18x22
- ☐ STANDARD BOXCAR 40' 100,000 lb. 23x29
- ☐ COVERED HOPPER CAR. 22x30
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- ☐ PASSENGER CAR AIR CONDITIONED, CHAIR. 18x35
- ☐ TANK CAR GENERAL SERVICE. 16x20
- ☐ TANK CAR ANATOMY 16x22
- ☐ GENERAL BOXCAR RAIL BOX TYPE. 27x30
- ☐ COVERED HOPPER CENTER FLOW. 16x20

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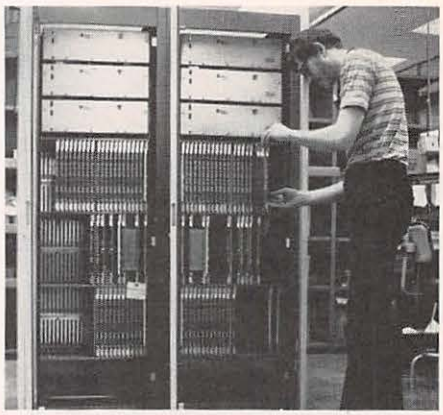
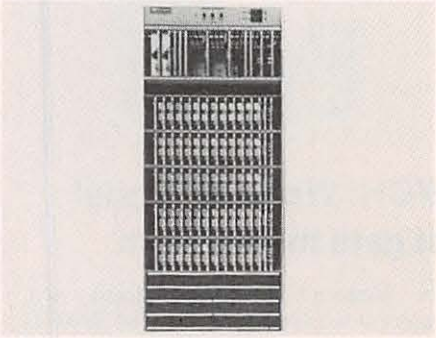
Systems Suppliers Exhibit



Digital Telephone: Switchboard-intercom

On exhibit by Digital Telephone Systems, Inc., will be the new D1204 PBX, described as "a new type of computerized telephone and switchboard and intercom for railroads that demand virtually uninterrupted telecommunications." The unit features dual microcomputer controls that automatically provide mutual backup in the event of the failure of one. The manufacturer also claims that a "a fault-limiting design practically precludes an overall failure and assures uninterrupted power to large portions of the system should a failure occur to a single component."



Rockwell-Collins: New MX-108 multiplex

Rockwell International's Collins Transmission Systems Division will show its latest frequency division multiplex (FDM) product—the MX-108, a state-of-the-art carrier system for voice and data transmission over microwave radio or coaxial cable facilities. Rockwell-Collins says the MX-108 multiplex emphasizes system flexibility, reliable performance, and economy of operation. The exhibit will also feature the Rockwell-Collins MW-328 6-GHz microwave radio and the LIS-11 Line Termination and Signaling equipment.

Why Ford, Bacon & Davis For Transportation?

. . . EXPERIENCE!

Experience that dates back to 1894 when, in our first year, we electrified the New Orleans Trolley System. In the 85 years that have followed we have developed rail systems throughout the world and created innovations like the third rail power system and the Ford, Bacon & Davis prestressed modual bridge. Today, we are working worldwide, offering comprehensive services such as:

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- Railroad Engineering and Design
- Railroad Operating Studies
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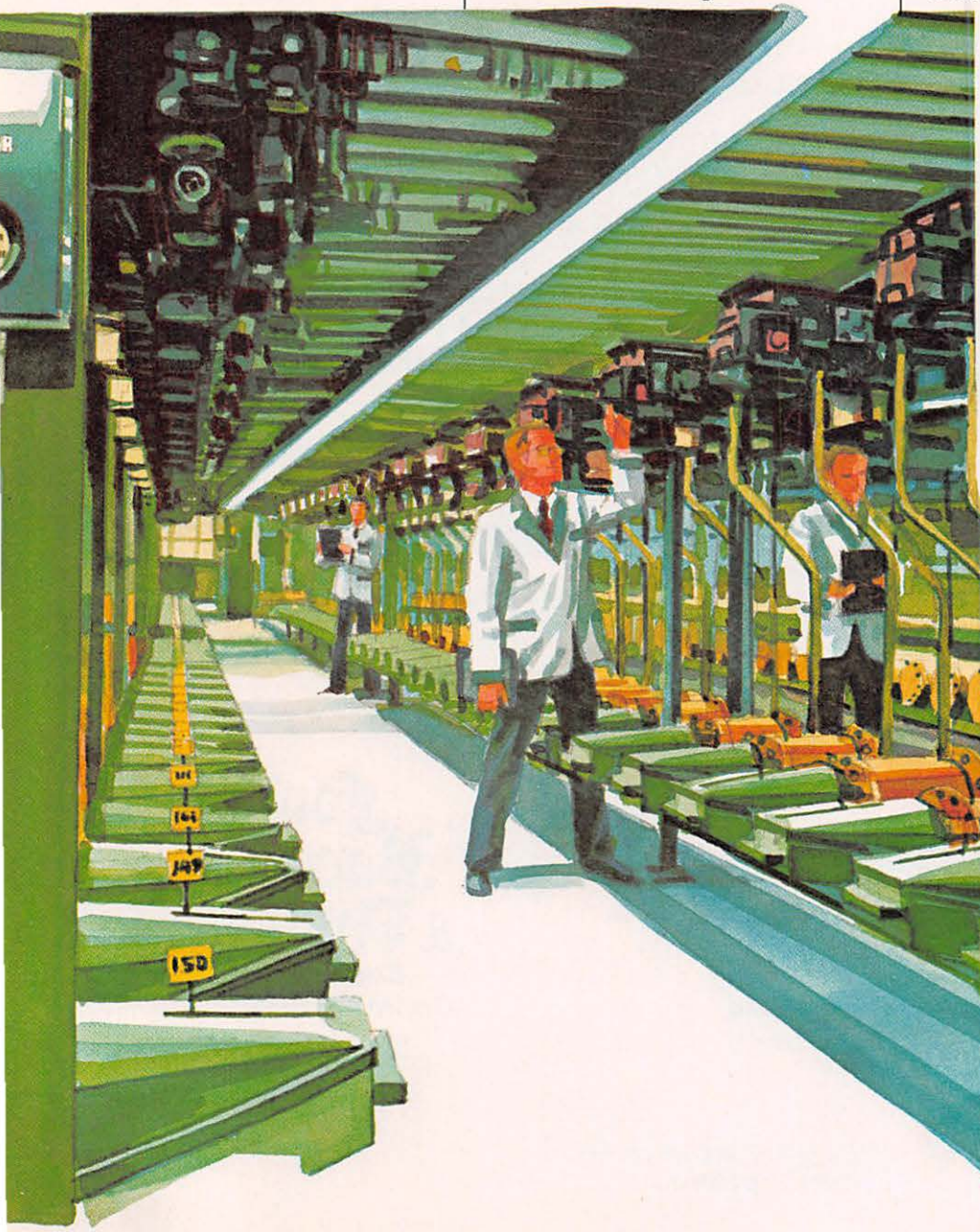

Another example is WABCO's computer-controlled inertia dynamometers. They are used to simulate in-service braking situations and test disc brakes, brake shoes and their relationship to car wheels. Huge

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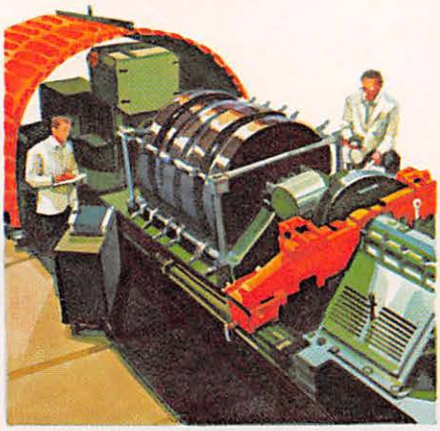
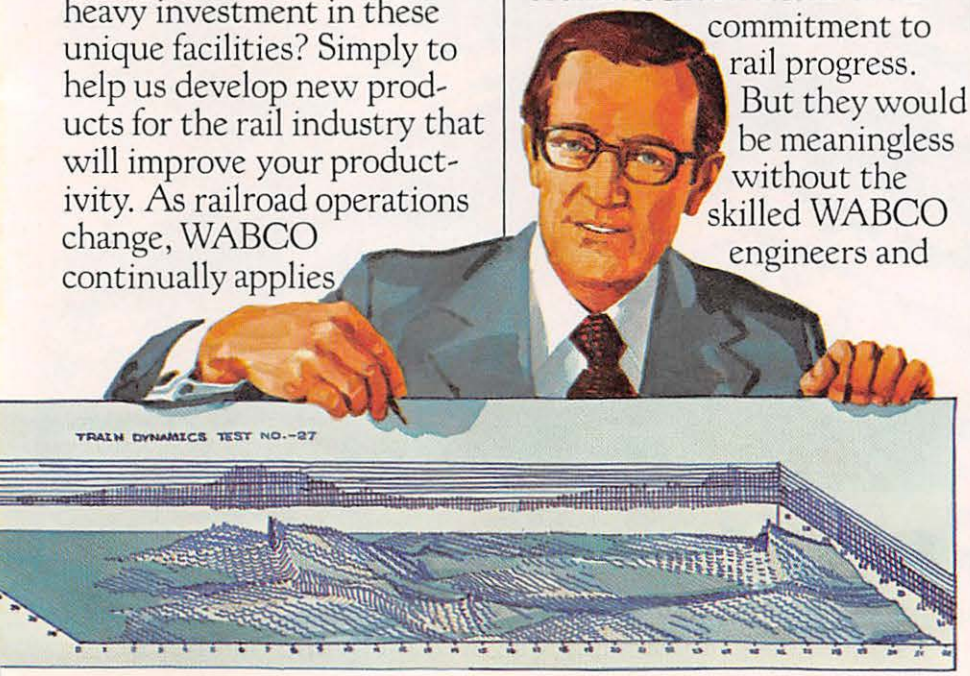
inertia discs simulate car weights ranging from 26,000 to 400,000 lbs.

The dynamometers can simulate effects of up to 250-mph stops while recording and analyzing response times, pressures and temperatures.

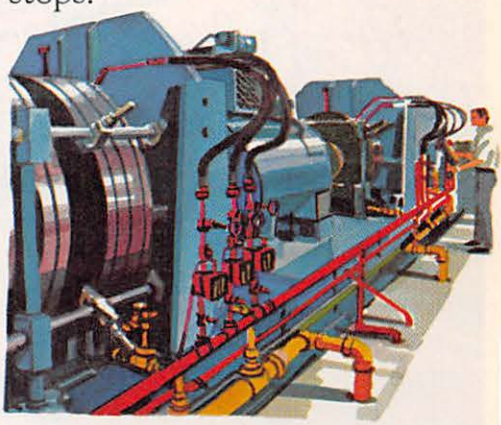


The reason for our heavy investment in these unique facilities? Simply to help us develop new products for the rail industry that will improve your productivity. As railroad operations change, WABCO continually applies the most innovative techniques to the science of stopping a train safely and economically. In fact, we conduct one of the world's largest privately funded research and development programs for railroad braking. WABCO innovations such as the WABCOPAC® Brake Assembly, SC-1 Empty and Load Equipment and the ABDW Freight Brake Control Valve were the result of such research. The ABDW Control Valve traveled thousands of miles of printout time before it was ever installed on a train.

Dynamometers and ultra-long air brake test racks are dramatic illustrations of our commitment to rail progress. But they would be meaningless without the skilled WABCO engineers and technicians that go with them—the experts who know how to turn sophisticated technology into practical solutions for you.



People in the rail industry have been riding WABCO's train of thought since George Westinghouse invented the air brake. It's a train that never stops.



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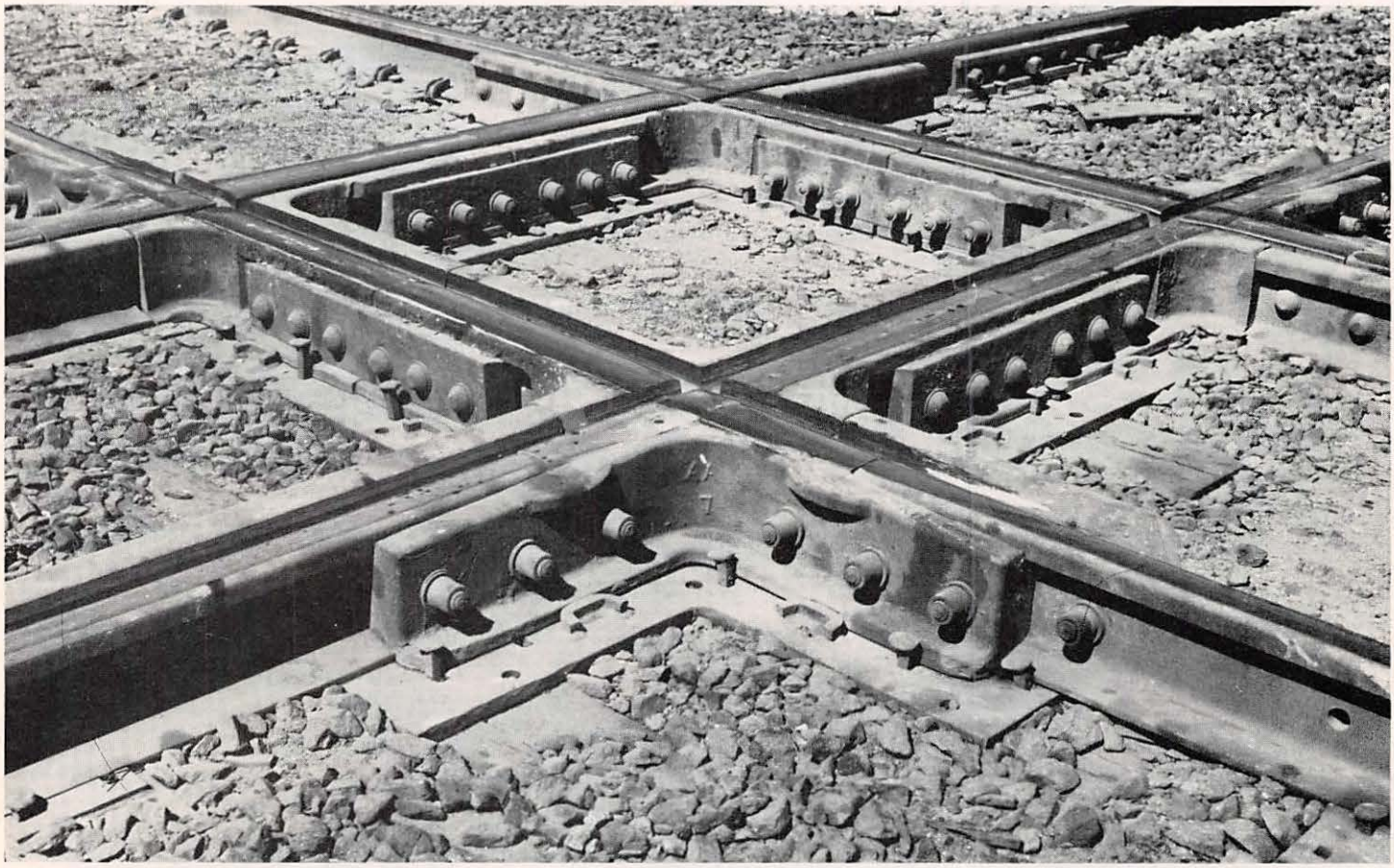
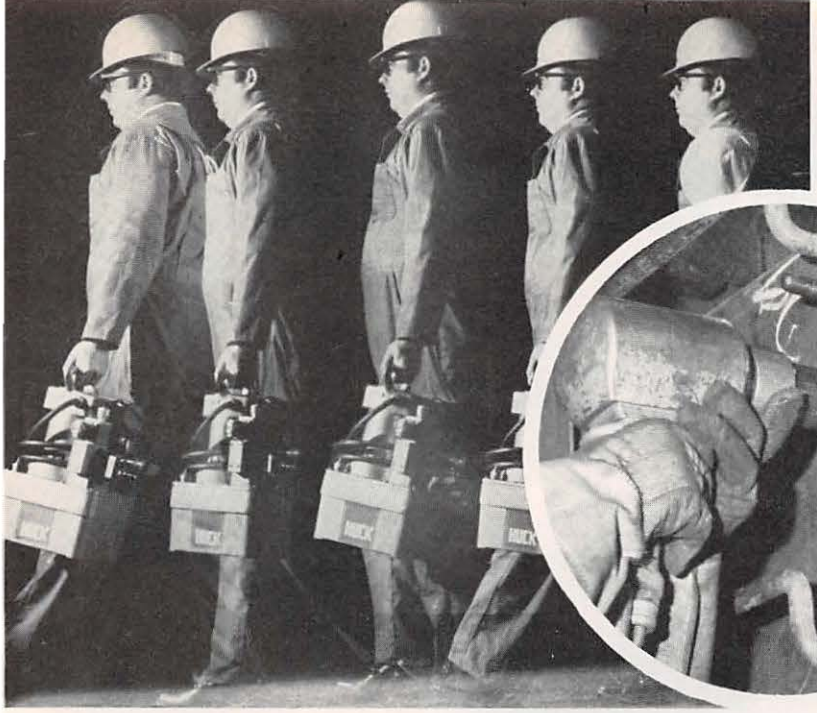
Huck teams up with railroads and equipment suppliers to help lower maintenance costs, improve track safety.



...Missouri Pacific The HUCKLOK® fasteners in the Broadway Crossing at Memphis, Tenn., maintained by MoPac, haven't loosened since being installed in March 1976. Judge for yourself the maintenance dollars saved on this single crossing. Multiply this amount by the number of crossings in your line—the savings will surprise you.



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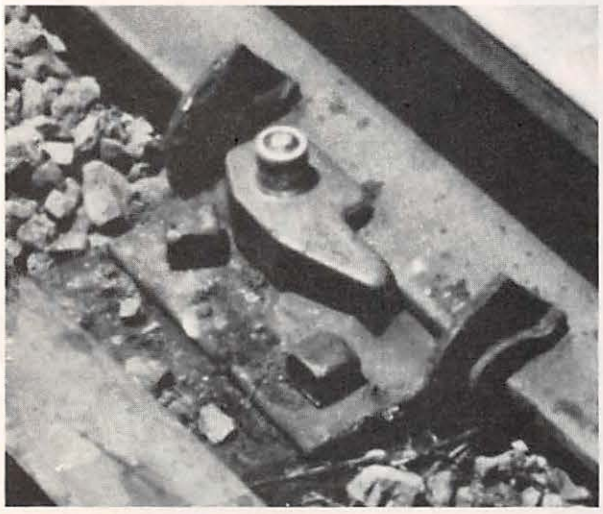

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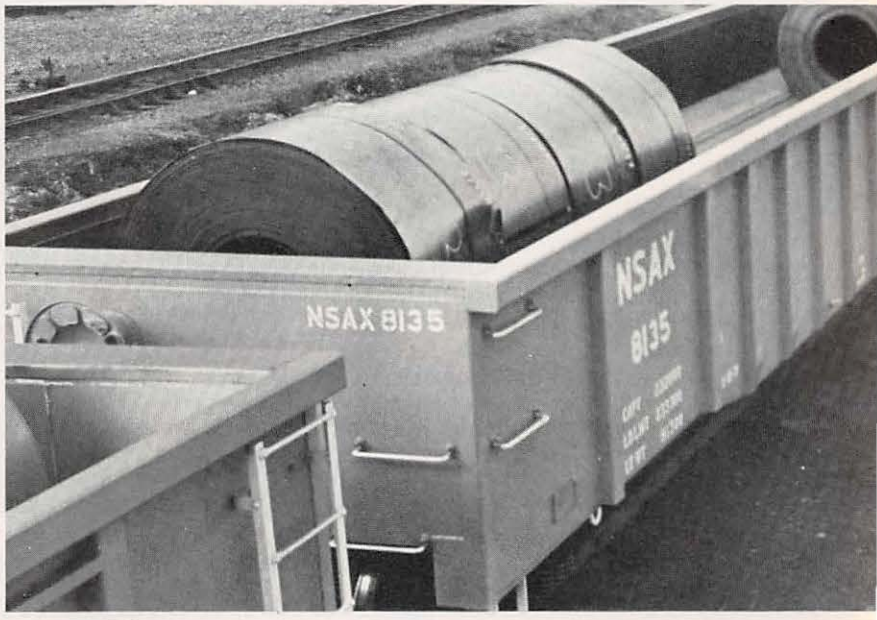

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One hundred miles of track is the transportation nerve of Great Lakes Steel's vast facility at Ecorse, Michigan, and HUCKLOK® fasteners . . . vibration-resistant, tamper proof fasteners . . . are part of that system.

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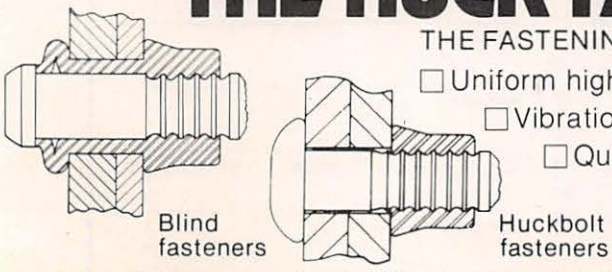

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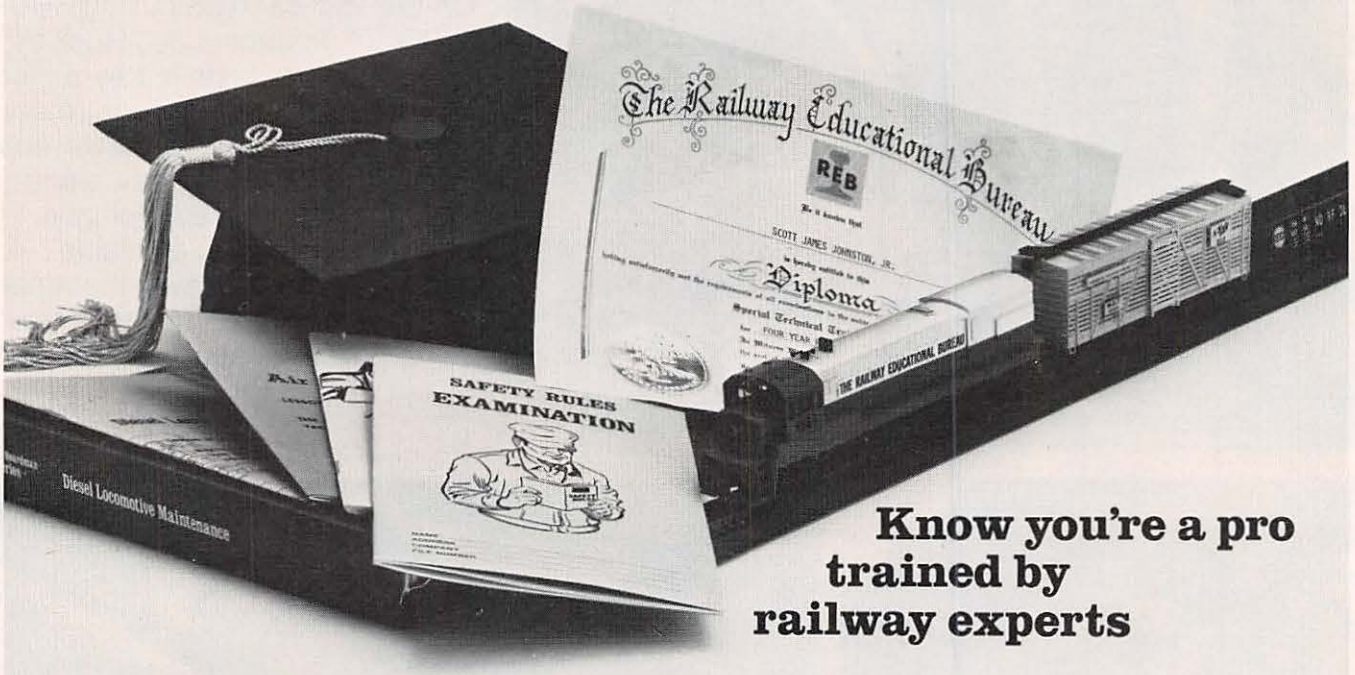

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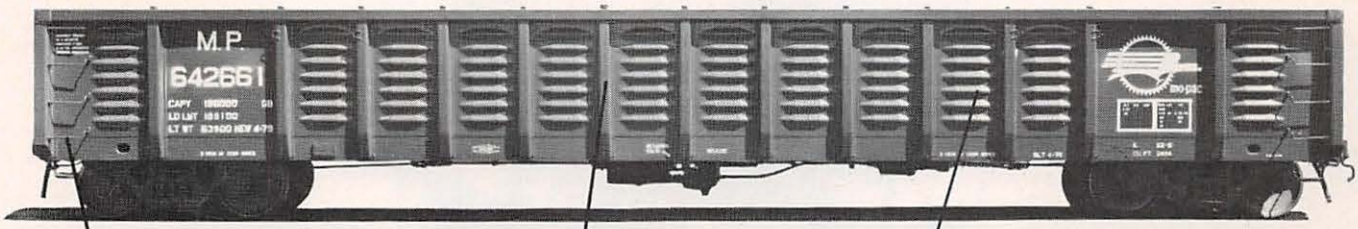

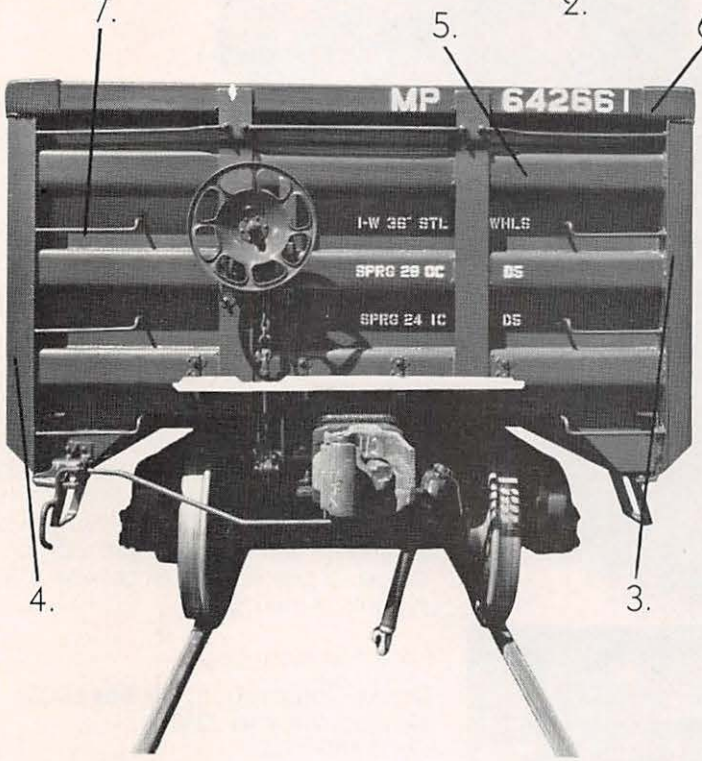

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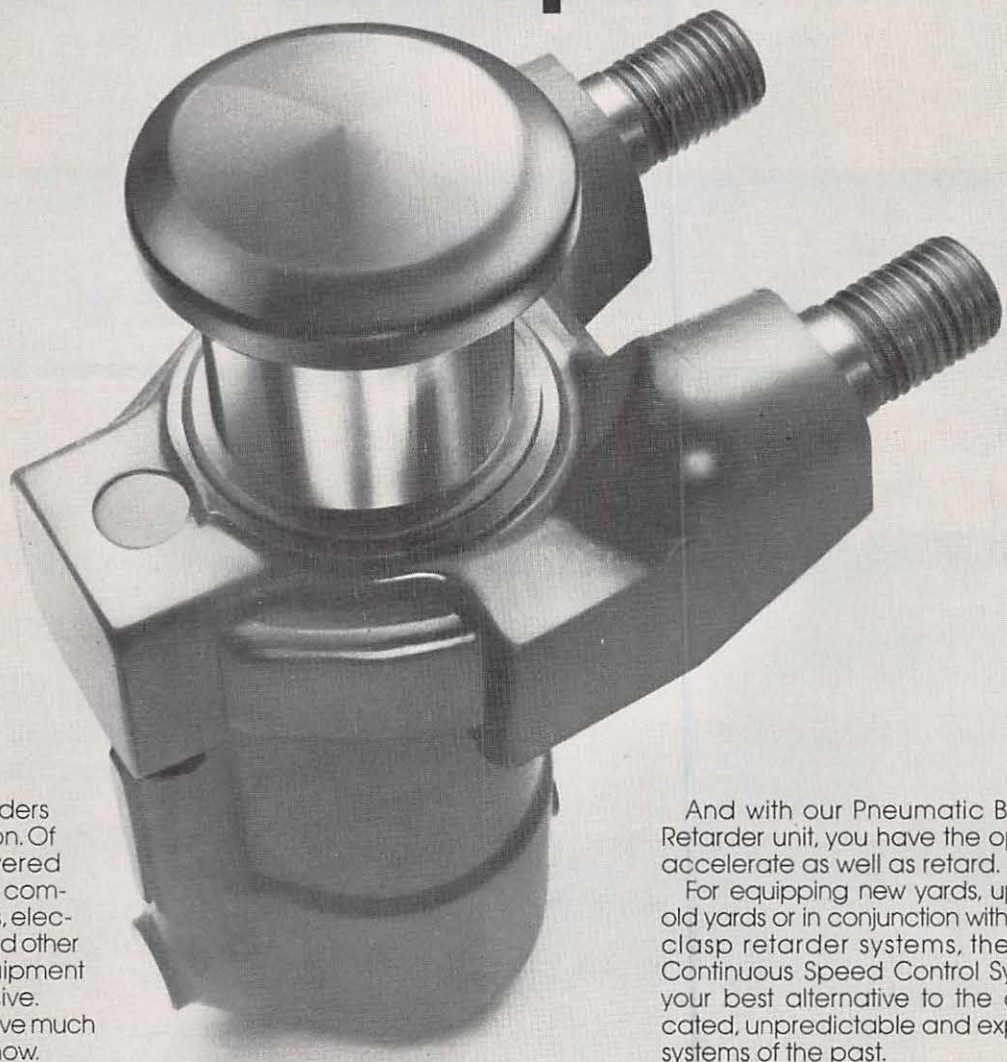
Some people think class yard control has to be complicated, erratic and expensive.



In their day, clasp retarders were quite an innovation. Of course they only delivered "spot" control. And big compressed air installations, electronic control systems and other complex trackside equipment does get pretty expensive.

But you didn't really have much of an alternative. Until now.

The beautifully simple, self-contained unit you see here is today's alternative to yesterday's clasp retarders. And it's in use throughout the world.

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Continuous control helps improve yard operations—higher capacity, less freight damage, increased safety, reduced downtime. Dangerous high-speed runouts just can't happen. Service and maintenance are as simple and economical as installation and operation.

And with our Pneumatic Booster/Retarder unit, you have the option to accelerate as well as retard.

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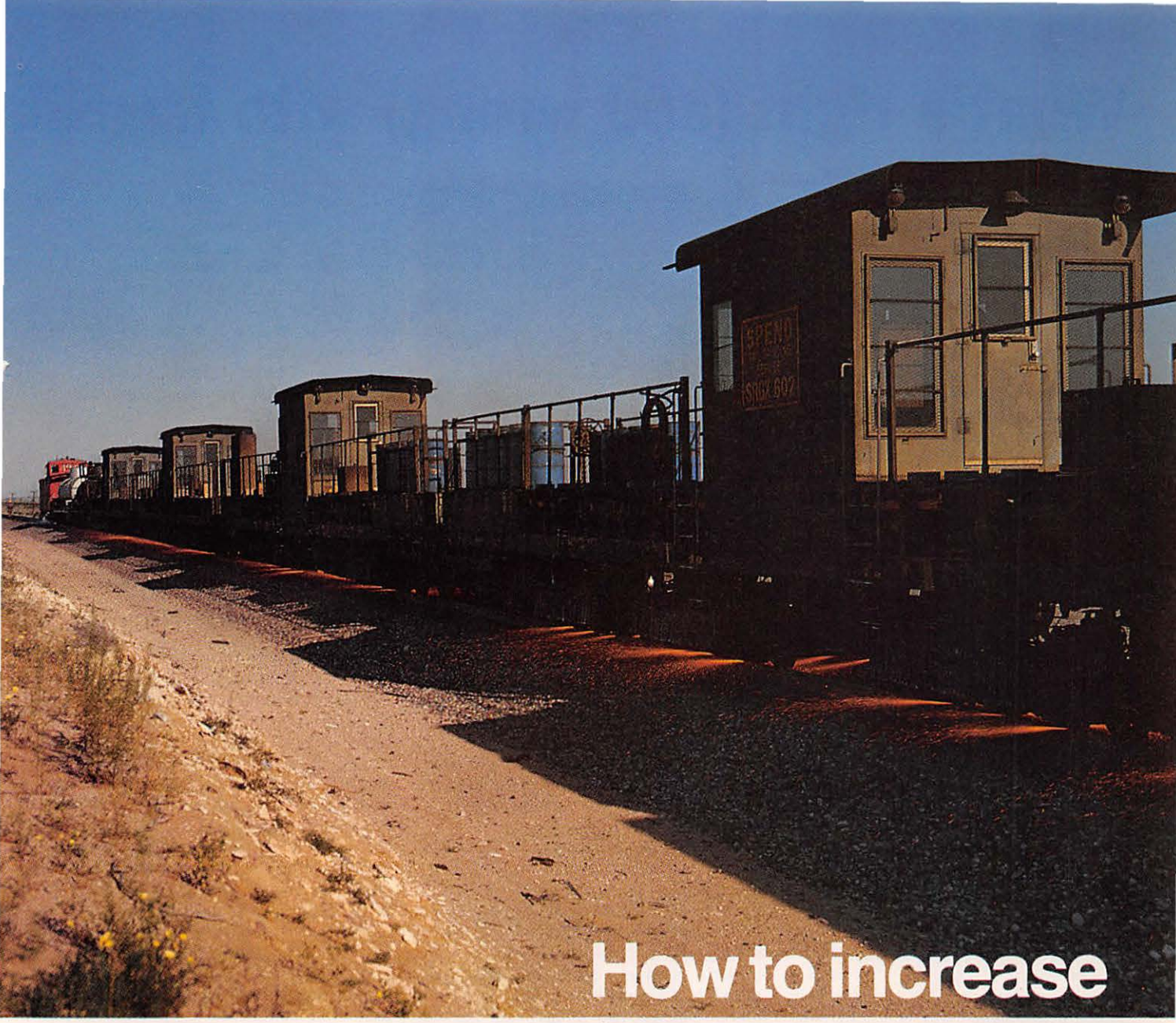
DH-3



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What's right (and wrong) with transit

John E. Warrington has quite literally been a pioneer in transit marketing: In 1972 the Washington Metropolitan Area Transit Authority created what is believed to be the first full-functioning office of marketing in the U.S. transit industry, and Warrington, who had been serving as special assistant to the general manager, was named to head that office. Warrington joined WMATA in 1967 after serving, at various times, as deputy director of the Federal City Council in Washington; as assistant, successively, to the late Senators Styles Bridges of New Hampshire and Kenneth Keating of New York; and as manager of corporate and financial relations for the Raytheon Co. For the last two years, Warrington has chaired the marketing committee of the American Public Transit Association, which has just completed a survey of the marketing activities of 88 transit properties. In an interview with *Railway Age* Editor Luther S. Miller, WMATA's director of marketing talked about the state of the art in his profession.

RA: Critics of rail transit contend that, in most cities, no matter how fine a system you build, you will not be able to persuade people to use it, and they often cite BART as a case in point. How do you respond to that?

WARRINGTON: BART was a noble experiment in heavy rail transit after many decades of no introductions of rail transit, and BART, just like WMATA and just like those that will follow us, made some mistakes. They had some technological problems that retarded ridership; we have had some ourselves. But we have given the lie to those kinds of negative statements from critics, because we're now serving in excess of a quarter of a million people a day, and our system is not yet one-third built. In June, with the added help of an energy crisis, we twice exceeded 300,000 daily riders.

RA: Is a quarter of a million riders a day in line with your projections?

WARRINGTON: As a matter of fact, for the most part our projections have been exceeded. When we opened the first segment of the system in 1976—a segment that was only 4½ miles long and was characterized by a United States senator as a railroad going from no place to nowhere—we had projected 8,500 passengers per day. Before long we were carrying 25,000, or triple the patronage we had looked for. So rail transit can have an attractiveness that exceeds even the hopes of some of the folks who are planning it.

RA: What role has marketing played in the Washington Metro's success?

WARRINGTON: In light of the position that I occupy, I would like to think it has played a significant role. But because we were among the very first transit marketing offices anywhere, and perhaps the first of a full-functioning variety, we had to feel our way along. We have no model to follow. All territory seemed like new ground.

The philosophy that we tried to bring forth is that we exist both because of the customers that are there and the ones that are not there. We serve the customers that we now have, and hopefully we're reaching the customers that we want to have in the future.

We do a modest amount of promotion, and we disseminate a massive amount of information. We have a lot of "how to" information so that people can confidently use their system. One of our early marketing tools for the Metro was an owner's manual, patterned after the thinking that when you buy an automobile you get two things—you get the automobile and you get an owner's manual. We wanted to impress upon the people that this is their system. They bought it, and they should know how to get the most out of it.

We think that we in marketing *have* had significant impact. There are those who would suggest to you that we haven't had half so much impact as some sheiks over in the Middle East, and perhaps they're right. You do see those energy-crisis bubbles of patronage—in 1974 and now in 1979. Some people were forced into a trial ride, which is basically the business that marketing people are in. We want them to take that trial ride. And if the organization's corporate marketing package is a good one—providing safe and clean vehicles, courteous operators, sensible routes, reasonable fares, and convenient schedules—then those people who take the trial ride are going to become loyal patrons and supporters.

RA: Can you cite an instance where a specific marketing activity attracted new customers?

WARRINGTON: Back in 1975, WMATA introduced—and I believe we were the first in the industry to do so—the differential fare. The person who rode in the peak hour paid a higher fare than the person who rode in the off-peak hours. We introduced that system with a good deal of information and some sound motivation materials. For the first time that I know of in the transit industry a fare increase was accompanied by a patronage increase. I like to think that this was a tribute to the soundness of marketing's approach to the people as to what they were getting. We promoted the advantage of the lower off-peak fare while giving them a straight story on the peak-hour increase.

RA: What is the single most important tool in the marketing man's kit?

WARRINGTON: I would say the most critical single element, at least, is the person who represents the authority to the public. That person is the bus driver, the kiosk attendant in rail, the telephone information operator, the sales clerk. You can have the finest marketing strategy in the world, but if you have surly people representing you with the public, you don't have a marketing program.

I think that marketing, to be done properly, should be done strategically. I'm not sure that's the way it is done in the transit industry.

Marketing should begin with the customer and end with the customer. The cycle should start with the determination on some scientifically sound basis of what the customer's needs and wants are, both the perceived and the real ones. That should then get cranked into the decision-making process that determines the prod-

uct that we put on the street. It should be dictated in the first instance by the needs of the people. After it gets on the street, the people should be checked again to find out if they believe their needs were met, and if not, what they think the problem is. That should be cranked back into the cycle.

I think that quite often we do tactical marketing. We find some people who don't like something, so we turn around and try to change it. But marketing should not be solely reactive. I'm struck by the Susan B. Anthony dollar, which from all indications is not a smashing success. The government will probably commission a multimillion-dollar marketing effort to try to sell it to the people after the fact—sort of like a crash program in lovemaking. They should have found out first of all whether or not the people wanted a hard dollar that had a very close resemblance to a twenty-five cent piece, or whether they would be turned off by that. Don't put something on the market and later tell somebody to go sell it. I think that kind of analogy relates to transit. Don't just put a bus on the street because somebody thinks that's the place on the map to put the pencil, but let's find out if that's where the people want it.

RA: What in your view is the biggest single mistake that transit systems make in their approach to marketing? Is it the tactical rather than the strategic approach?

WARRINGTON: That's part of it. There are three kinds of orientations that transit properties might have. There's the market orientation; there's the customer orientation; and there's the constituent orientation.

The market orientation begins with a broad-gauge look at the market that you're attempting to serve; hopefully you can segment that into subgroups that need to be served, then you can take a look at the differences among their various needs.

I think a good approach is to try to be customer oriented, but to relate that to the broad marketing view. The fact that a single customer wants your through route bus to take a loop around a given set of streets may be a good thing from that customer's standpoint, but it may not be a good thing for the other 40 people who are already on that bus. So those two things have to be viewed, I think, simultaneously. But I'm afraid there is a tendency to favor just customer orientation. A letter "poured in," if you will. If this one customer thinks the service is bad, then it obviously has to be changed.

The third—constituent orientation—is the most troublesome. An "expert" on transit expresses his feeling. He may be an influential person in the community who has not used public transit in the last 10 years, but he is suggesting that he can make judgments for the people who *are* users. His comments need to be examined in the proper perspective.

RA: Is your job made easier, or is it made more difficult, by the fact that some of your own constituents and customers are also the political leaders who control your future?

WARRINGTON: We not only live in a goldfish bowl in Washington—we sort of live in an aquarium, with some rather important personages constantly looking at us.

We would like to think that a patron is a patron, and that every recommendation or every complaint is worth acting on with dispatch; but obviously when congressional mail comes in it gets handled rather quickly, and it gets handled with a great deal of attention. For us to do otherwise would be naive. It's difficult, and it places upon WMATA and the people who work here an additional obligation, because the impression we make on the national decision makers, whether they be in the legislative or the executive or the judicial branch, is an impression that Los Angeles and Chicago and others are going to have to live with. Fortunately, we have been making a good impression lately. We did have our bad moments, when our estimates of costs were creating quite a stir; they were always different from earlier estimates and never downward. At that time, I think, we were a millstone around the industry's neck. But now, because we are experiencing the kind of success that we are, we're probably the touchstone for some very positive actions that can hap-

"We haven't learned how to market marketing"

RA: What are some of the lessons that transit marketing people have learned in recent years, and what are some that they haven't learned?

WARRINGTON: We haven't yet learned how to market marketing. Marketing moved into the industry with a real flourish back in 1974. By the end of 1973, I daresay there were not more than four or five transit marketing offices in the country. But a study done at the end of 1975 showed that 84% of the properties surveyed had offices of marketing, or marketing and information, or planning and marketing, or some variation thereof. It became a very important fad in the industry. I worried then about its being a kind of hula hoop that would come in and create a big stir and then die. Well, I don't think it's a hula hoop, but it might have become a frisbee. It's still around but it is not given the degree of serious consideration and serious attention that I think it needs to be given.

I do not believe the voice of the marketing person is heard often enough and with sufficient attention in the upper councils at the policy-making levels. It is terribly important that the marketing voice be heard. If the marketing voice isn't saying things that are worth hearing, then perhaps there ought to be a new voice in the job. But that voice should be heard.

I suspect that on many properties marketing is there because doing away with it wouldn't be very chic in this day and age. As I sit with marketing people across the country—and I've done much of that in the last two years as chairman of the APTA marketing committee—and as I speak at seminars across the country from time to time, I find that the appeal that comes from these bright young people who have been attracted to transit because of the existence of marketing is this: "How can I get my boss to listen to me? How can I get the information that is developed through good, solid, market research to be looked at by the people who make the judgments?"

That's a sort of forlorn plea. I get the impression that the marketing people are tied together by a sort of quiet desperation, that they have all these wonderful things that they want to say, and all these wonderful things that they want to do, and nobody's really listening to them. "Nobody" is obviously too strong a term —but more attention should be paid to what they're saying. Unfortunately, we haven't yet found out how to hook up a receiver to our transmitter.

Growth in Washington Metro's ridership continues to exceed expectations; less than one-third completed, the system now carries more than 250,000 passengers a day.

pen at the federal level for the industry nationwide.

RA: How does transit marketing generally compare with that of other businesses, in terms of sophistication, top management support, funding?
WARRINGTON: I think we have a long way to go. When you look at the investment that private industry in the consumer goods area is making in marketing, and compare that with the investment that's made in promotion by even the most marketing-oriented transit properties in the country, I think you'll find that the disparity is amazing. We are, after all, dependent on tax revenues over and above the revenues we pick up in the farebox, and one wouldn't expect an organization like that to be competing with Procter & Gamble or with Liggett & Myers or with other consumer-oriented companies, whose plowback of profits into marketing is astronomical. But it's been pretty well shown that something approaching or perhaps exceeding 2% of operating expenditures would be a sound transit marketing investment. I think you'll find very few if any properties in the country that invest this much.

RA: How much does Washington Metro invest in marketing?
WARRINGTON: Something on the order of one quarter of one percent goes toward ridership promotion and patron information programs. It's quite low. It does have its positive side: It requires us to engage in creative use of the few dollars that they do give us.

RA: What functions does marketing cover on the Washington Metro?
WARRINGTON: Marketing on this property includes more than it does on many. For example, we are one of the largest charter operators in the country, and that's run out of this office. We conduct the sales, we handle and update the tariffs, we cut all of the charter service orders, and we do follow-up calls, not only for follow-on business but to make sure that the bills get paid. We do about $4 million in charter and contract sales. As a matter of fact we exceeded $4 million last year. We also generated close to $1 million net revenue from sale of bus and rail advertising space.

We also have the customer information telephone service; we have 58 operators and seven supervisory personnel, attempting to handle approximately 50,000 calls per week. Under normal circumstances we handle over 90% of those. But with a phenomenon such as we had in June, when the tourist season and an energy crisis coincided with changes in fares and changes in several routes, we found we could handle only 65% to 75%.

We also control distribution of consumer-related materials. We have, for example, at some 300 locations, information racks with as few as four and as many as 16 pockets in them; we put those in places like libraries and government buildings. We stock them with timetables and certain collaterial materials, like "How to Ride a Bus" or "All About Metro." We distributed over five million timetables last year.

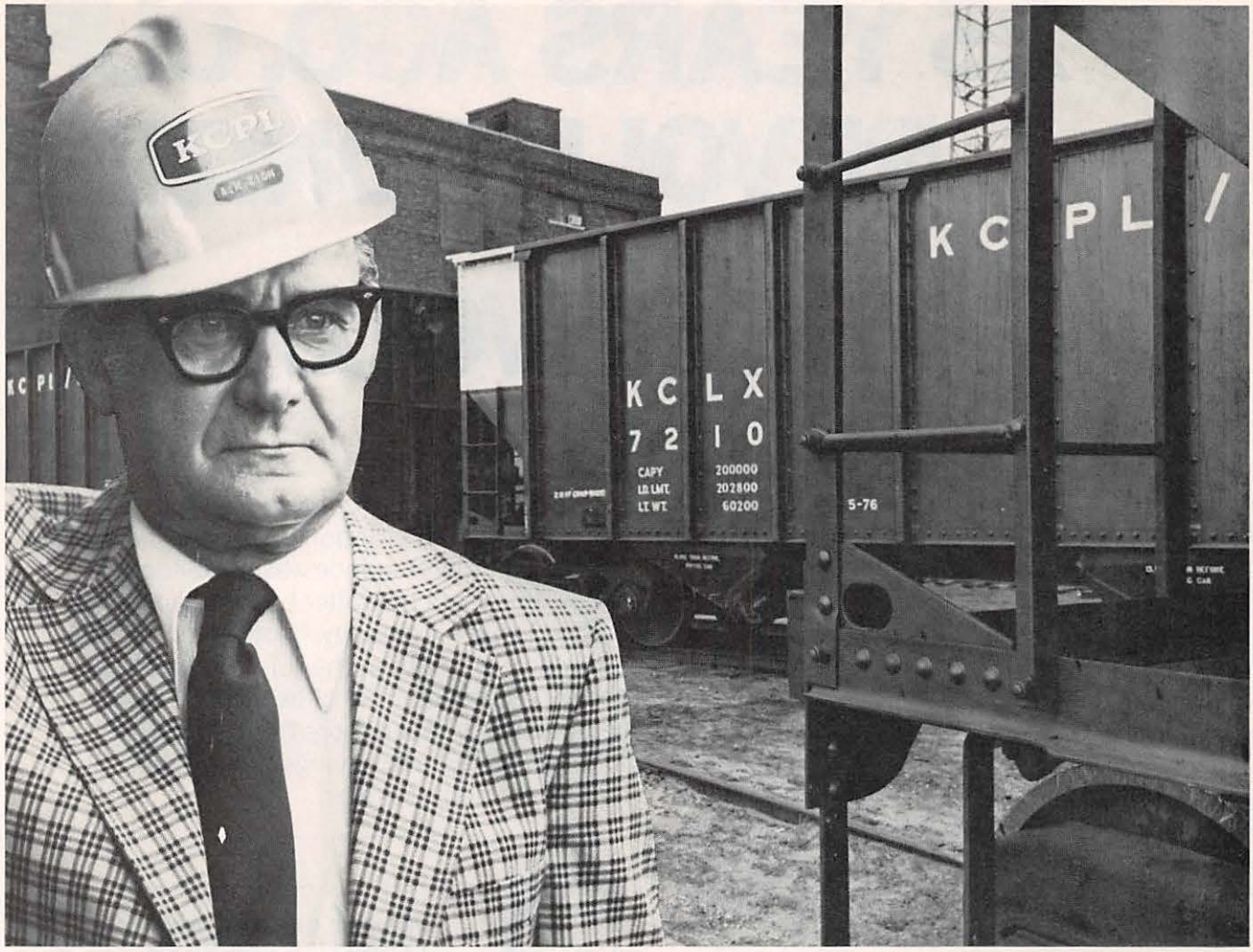
The sales outlets are a function of this office. When we took over the private companies in 1973, there were about 20 sales offices. We now have 315 commission-free outlets, where people can buy tickets and tokens and the new and very popular two-week flash pass.

We also have a merchandising branch, which is what most people think of when they think of marketing. It's the most visible side, and it's the most vulnerable side. It's the activity that puts together the ads that you see in newspapers and the ads that you hear on radio. (If we had a couple of extra bucks, it would be nice if we could have an ad or two on television for wider exposure, but we can't afford that.) Advertising is part of marketing, as a room is part of a house; but it is the activity to which we have the fewest people committed. We have one person committed to our information and promotion programs, and we do not have an advertising agency. That person jobs out many tasks that have to be done to get our information and promotion programs implemented. We use free lancers to a large degree and find it's very economical. By doing so we were able to cut our promotion budget by 15% some years back without any loss of promotional exposure. Unfortunately, it's been cut every year since.

RA: What have been some of the tough marketing problems you've had to face?
WARRINGTON: I think the most difficult thing has been trying to play our role as ombudsman within the authority, representing the customer, whether he has a complaint or a commendation or just a suggestion, but in any case trying to represent him inside the authority. We have one section devoted to this effort. Obviously, the difficult one is the complaint. We try very hard to have that complaint addressed and to have the grievance redressed. This means that quite often we come as the bearer of bad news; it's difficult to maintain your popularity and still do your job as an ombudsman within the authority.

RA: What are some of the things that you are not now doing at WMATA that you would like to be doing if you had the money?
WARRINGTON: I would like to do more and better market research. Money, of course, doesn't assure that that research will be influential, but I would like to do it. All we have to do is look at what has been happening within the federal administration within the last few weeks to find out how solid public opinion polling, if it's looked at by people at the top, can cause some changes in direction. Good, solid, attitudinal research should be done by marketing people, and it should not be

(Continued on page 125)



"Holland Company's Wear Eliminators help us keep unit train maintenance costs way down."

Arlie Zion, Manager Unit Train Maintenance, Kansas City Power & Light Company

Holland's Hollube® Wear Eliminators and Rotary Dump Uncoupling Levers proven on KCLX's tough coal route.

While coal car maintenance outlays skyrocket, Kansas City Power & Light keeps its unit trains in superb shape at a remarkably low cost.

Arlie Zion, Manager of Unit Train Maintenance, says this is due to rigid maintenance schedules, constant monitoring of cars and careful component selection.

In what is a unique tradition in the utilities field, KCLX has an annual teardown of certain coal cars. Components are inspected (by utilities, railroad and supply people) to pinpoint wear patterns that develop from year to year.

Holland's Hollube Wear Eliminators and Rotary Dump Uncoupling Levers were involved in the latest teardown.

"The Hollube parts looked like new after 135,000 miles," says Mr. Zion, "and there was no wear at all to the steel parts they protected, such as the center plate area."

KCLX has also installed Hollube Coupler Carrier Wear Eliminators. "We used to continually replace cracked and worn carrier irons," says Curtis Blanc, President of Mid-America Car Inc., which maintains the KCLX fleet. "We haven't replaced a single one since we installed the Hollube parts."

Curtis Blanc shows coupler carrier wear eliminator after 135,000 miles service.

"Our route is a real test for the Hollube parts and the rotary dump levers," points out Mr. Zion. "One five-mile stretch, for instance, rises 400' and has 14 curves between 2° and 12° including two horseshoe and a double horseshoe curve."

Holland's Rotary Dump Uncoupling Levers, which are designed to eliminate the chronic problem of indexer damage, and Hollube Wear Eliminators, which are still going strong after more than 400,000 miles service on coal hauling railroads, are drastically cutting labor, inventory and parts costs.

They are saving money for railroads and more than 25 major utilities.

For more information contact:
John Hoffmaster, Sls. Mgr.—Ulitities
Holland Co. Freight Equipment Div.
1470 N. Farnsworth Ave.
Aurora, IL 60505
(312) 851-8200

HOLLAND COMPANY

Circle 43 on Reader Service Card

25 YEARS AGO, OUR REVOLUTIONIZED

THE REVOLUTION

Like most revolutions, ours didn't just happen one day. The story of the Timken® "AP" bearing started long before its introduction in July 1954.

The beginning.

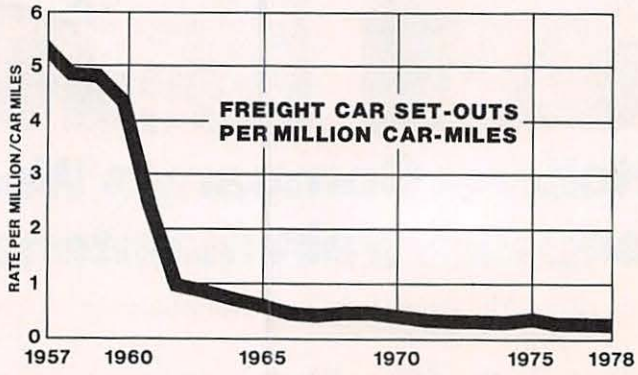
It actually begins in 1923, when the very first railroad cars equipped with Timken tapered roller bearings went into service. These forerunners of our "AP" bearings (two single-row bearings in a special housing) proved early on that they could run performance rings around conventional friction bearings. But they were just too expensive to buy and install for widespread freight-car use.

The breakthrough.

Then, after years of experimentation, research and refining the application of two bearings in a housing, came the big idea—a two-row bearing, prelubricated and preassembled, completely self-contained. A bearing so versatile that it could be easily applied to all designs of railroad car trucks. A bearing that could sell at an affordable price. The Timken "AP" bearing was born.

The payoff.

"Hot boxes" were common when all freight-car axles rolled on friction bearings. The cost to railroads in maintenance was horrendous. Today, thanks to the roller bearing pioneered by The Timken Company, "hot boxes" are the exception rather than the rule. Between 1957 and 1978, the number of bearing-related setouts has dropped more than 90 percent. That translated into savings for railroads of millions of dollars a year.



The savings don't stop there. Take oil:

With the way oil prices are today, every drop saved is money in a railroad's pocket. In 1976, the freight-car fleet was just about evenly divided between friction bearings and roller bearings. Friction bearings in that year gobbled up some $7.98 million of oil. The grease bill for roller bearings came to only $520,000—a difference in lubricant costs of over 15 to 1.

TIMKEN® "AP"™ BEARING RAIL FREIGHT.

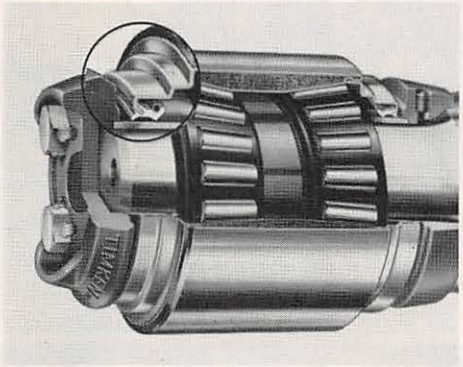
ISN'T OVER.

The revolution didn't stop.

We'd no sooner invented the Timken "AP" bearing than we started right in re-inventing it.

Timken Company engineers were determined to find ways to make the most reliable freight-car bearing even more reliable. (No easy task. One of our very first "AP" bearings, installed on a 70-ton covered hopper car in 1954, was returned to us in 1976—for routine inspection!)

And find them they did. Our "AP" bearing has undergone 13 significant design innovations since its introduction 25 years ago. (Just as significant: through all those changes, we maintained complete component interchangeability.) One of our most important innovations is the elastohydrodynamic (EHD) seal, engineered to improve lubricant retention and reduce seal wear—a major cause of bearing-related setouts.



We've devoted almost four million laboratory test hours to seal research, development and quality control.

Another breakthrough: the "XP"™ bearing.

Our research led us to our best bearing yet—the Timken "XP" bearing. Under normal operating conditions, it can go for 600,000 miles or ten years without reconditioning. That means our "XP" bearing could save you as much as $1,000 or more a car on bearing maintenance.

Our continuing commitment to you.

In 1977, two Timken Company engineers who spearheaded development of the "AP" bearing received the distinguished Elmer A. Sperry Award "... for their leadership in the original development, subsequent improvement, manufacture and application of tapered roller bearings for railroad and industrial uses."

We're continuing basic research into materials, geometry, lubrication, manufacturing—every area that will help us make the "AP" bearing the best bearing your money can buy.

Our "AP" bearing revolution may be 25 years old. But it isn't over by a long shot.

The Timken Company, Canton, Ohio 44706.

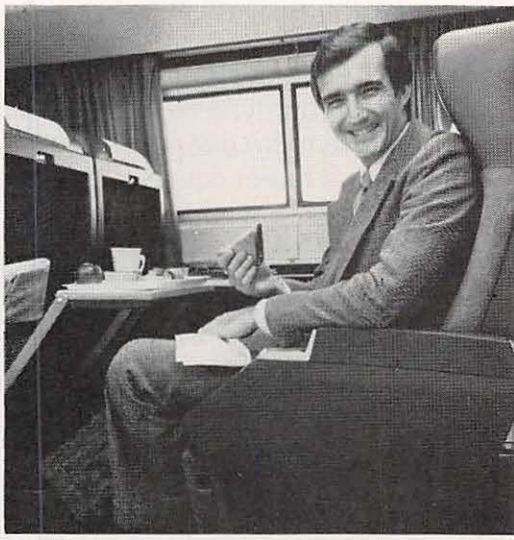
The company that tapered the bearing can taper your bearing costs.

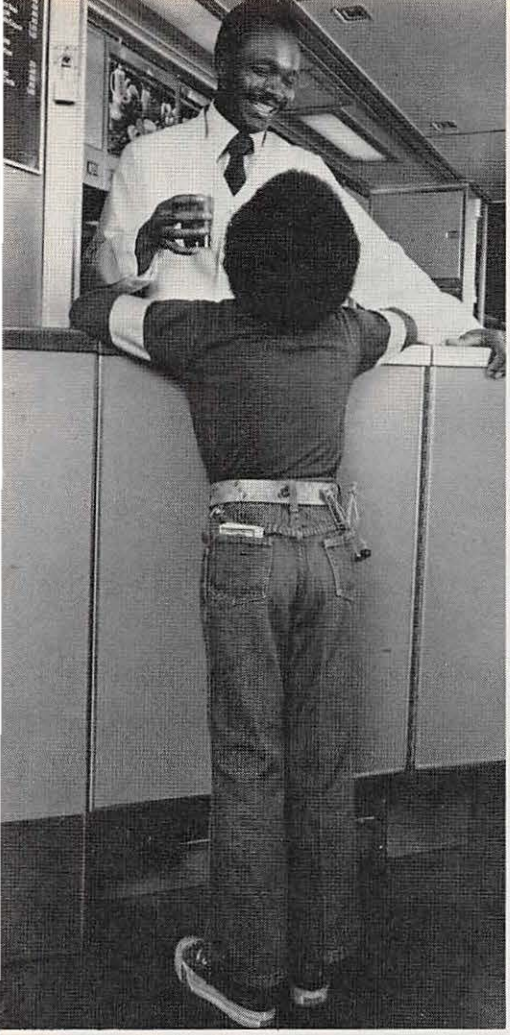
PLAN TO VISIT OUR RSA BOOTH 407 IN CHICAGO, SEPTEMBER 15-19, 1979.

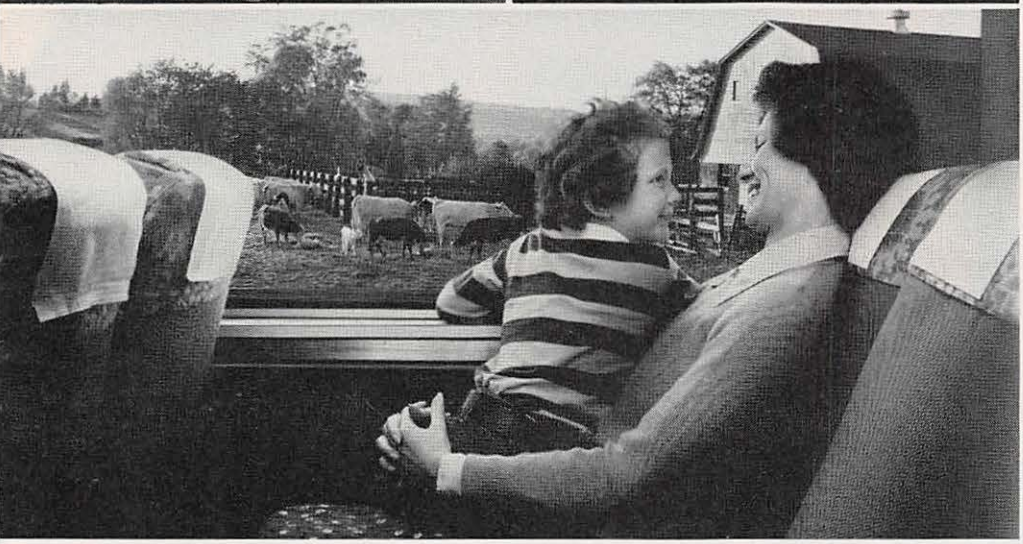
TIMKEN®
REGISTERED TRADEMARK
TAPERED ROLLER BEARINGS

Circle 44 on Reader Service Card

19 MILLION AMERICANS CAN'T BE WRONG.







A lot of people rode the railroad last year. And more people are coming back to it. Because we've all been pulling together and making it a relaxing, refreshing way to travel again. With many new cars, new fares and service to over 500 cities.

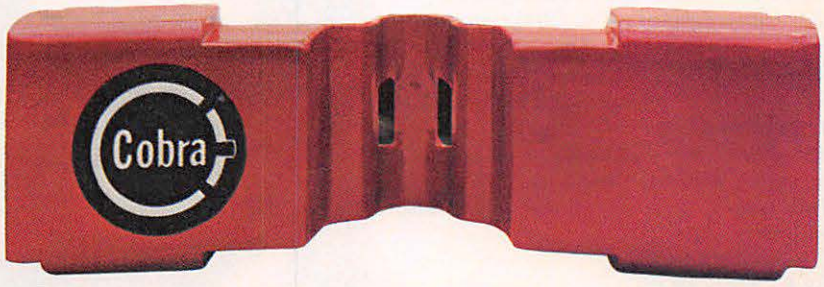
If you haven't taken Amtrak lately, you're in for a very pleasant surprise. So, next time you're planning a business trip or a visit to that friend or relative, get on board. Taking the kids sightseeing? Get on board! You'll see just how well Amtrak's working—when we all work together.

Amtrak®

WE'VE BEEN WORKING ON THE RAILROAD.

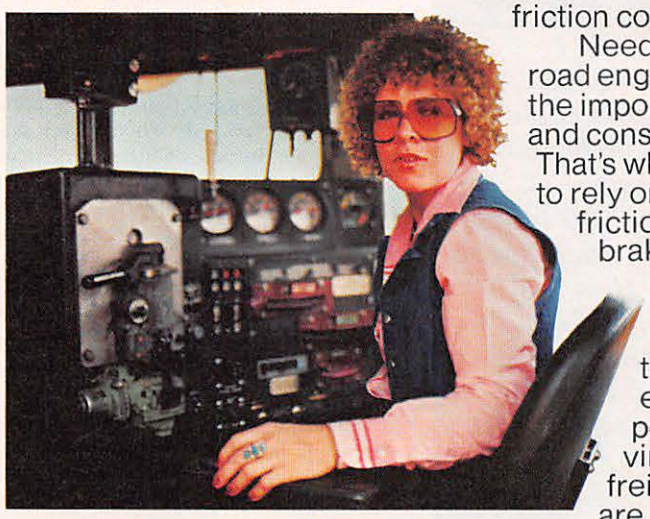
LESLIE RUSSELL PAIRS OF

TRAVELS WITH UP TO 200 SHOES. COBRA® BRAKE SHOES.



Qualified engineer Leslie Russell is authorized to operate any type of freight or passenger train. That's some accomplishment when you consider that Leslie is only twenty-one years old.

Leslie got interested in railroading when she was a tour guide for AMTRAK. She worked about 200,000 miles with AMTRAK, then joined



Chicago and North Western as a brakeman (brake*woman*?). After a year of study and practical experience, she earned her Engineer's Certificate, with some of the highest marks ever scored.

Now Leslie works as a hostler, taking locomotives from trains to the CNW repair shop in Chicago and back to the trains when the work is finished.

Handling between 10 and 50 locomotives on any given shift, Leslie can recognize the difference between braking cars and locomotives with metal shoes and those with high friction composition shoes.

Needless to say, railroad engineers understand the importance of smooth and consistent braking. That's why so many choose to rely on COBRA high friction composition brake shoes.

The fact is, last year 68,000 new cars added to the U.S. fleet were equipped with composition shoes. And virtually all new freight cars built today are fitted with this modern and efficient braking material. Further, many railroads have converted a large number of their older cars to composition brake shoes, because experience has shown that these shoes play an important role in increasing productivity and decreasing maintenance costs.

In both the new and conversion categories, COBRA brake shoes are the favorite choice of most railroads. After all, who knows more about quality and performance than the leading innovator in the composition brake shoe industry?

You can depend on Leslie Russell to run an efficient train. And you can depend on COBRA composition brake shoes to help increase braking efficiency and lower wheel maintenance costs.

For more information, write: Railroad Friction Products Corporation, Wilmerding PA 15148. Or phone: (412) 273-1106. In Canada: COBRA Friction Products, Ltd., P.O. Box 2050, Hamilton, Ontario L8N 3T5.

Cobra®

Alan Boyd: "I see the rebirth of the rail

A survey by Railway Age *early this year indicated a market for 4,000 new intercity, commuter and rail transit cars over the next 5 to 10 years—including 800 Amtrak cars for which federal funding now seems assured (*RA, *Jan. 8, p. 23; Aug. 13, p. 28). In an Aug. 13 address before the University of Wisconsin Graduate School of Banking, Amtrak President Alan S. Boyd described trends that he feels will create an increasing demand for new rail passenger cars—and he called on bankers to help reestablish a major rail-car-manufacturing capability in the U.S. The following is excerpted from that address.*

By ALAN S. BOYD
President, Amtrak

In the past few months we have experienced some very important gains in passenger ridership and in revenues. The demand is there and it is nationwide. It is driven by energy cost and restricted availability. The American traveling public is beginning to believe that the energy crisis is here to stay—and that the high cost is here to stay.

One of the first major market development programs initiated by Amtrak was a joint project with the Greyhound Lines for rail/bus tours in Florida. Today, we have an increasing number of these, and we serve an increasing number of intermodal terminals in cities all over the country. This is a beginning.

It is my belief that our long-range planning must make use of our city center rail stations as hubs, or focal points, for all kinds of passenger travel. It is possible today in Washington, Boston, New York, Chicago, San Francisco, and many other cities for a traveler to leave home on a city bus or subway, ride to an Amtrak terminal, travel by train to a destination and end his trip in public transport or with Rent-a-Car. It should be possible, as an alternative to the automobile, to go anywhere in the country on public and commercial transportation. Intermodal planning should coordinate the hundreds of existing and planned transportation systems into a reliable and smoothly functioning network. Today these systems are dependent upon each other, but they are not always structured for the benefit of the traveler.

The major airlines serve about 600 communities. Amtrak serves around 575, and intercity buses serve 15,000. Although Amtrak itself serves only 575 communities on its mandated network, the total rail system reaches 45,000 communities. The existing potential for a greatly increased rail passenger system is tremendous. All together—rail, bus, and airlines—there is the potential to create a strong and effective alternative network of public and commercial transportation.

"One 18-car train with 1,400 passengers could replace 636 automobiles on a crowded highway. Think what 10 trains, 100 trains, or 1,000 trains would mean in fuel conservation and highway decongestion all at one time. These are the kinds of figures transportation planners must be looking at today."

Amtrak President Boyd

As a result of the pressures on automobile travel, generally because of energy and environmental reasons, both amplified by soaring costs, the fundamental interests of each community are expressed in different ways. Where distance and time are important factors, the aircraft offers the best alternative, and a commercial aircraft can deliver more passenger miles per gallon than the average automobile (36.2 to 62.1 pm/g for planes of various sizes vs 35 pm/g for cars). Shorter trips may well be served by the intercity bus and train. Some people do not like to travel more than a few hours on buses, but the intercity bus can deliver up to eight times more passenger miles per gallon than the average automobile (287 to 35). The train is an excellent alternative to the automobile and the bus. It is more spacious; it can be more comfortable; and trains are the safest and most energy efficient mode of transportation. Good train service can be very reliable and is less affected by weather than others.

With so much to offer, rail passenger travel has to get back into the good graces of transportation planners, but so often the most effective transportation planners and movers are those representing special interests. Such representatives cannot be expected to support broad, comprehensive policy, especially when such a policy may reduce the role of their favorite vehicle. As a result, whatever policy there has been is today in shambles.

National policies very often emerge from the pressures brought about by the conjunction of special interests. People who want things done, for various reasons, see that they get done. This means that public policy does not always serve—or truly represent—the public interest.

What is the public interest? In transportation, the public interest is not always as easy to identify as it might seem. The Department of the Environment in the United Kingdom published the following in 1976:

"The prime objective of transport policy is an efficient system which provides good transport facilities at the lowest cost in terms of resources used. But, the transportation system cannot be left solely to market forces, for there are other objectives also. First, a social objective relating to passenger transport: The market would not, left to itself, ensure that all members of the community had reasonable opportunities for mobility. Secondly, an environmental objective: for the community in terms of environmental damage and accidents. Thirdly, a resource objective: The market alone does not prevent the extravagant use of scarce resources, notably energy. The transportation market must there-

"We need the cars, but first of all we must have an industry to manufacture them. There is no reason why we should have to go overseas to find a good share of what we need."

passenger car manufacturing business."

Bilevel Superliners, now being delivered by Pullman Standard, will meet Amtrak's western needs, but Amtrak wants 800 low-level cars for service in the East and Southeast. Above, passengers detrain at Chicago's Union Station from a Superliner train.

fore be strictly managed in the interests of three nontransport objectives."

In the case of transportation, such an understanding of the public interest is most important. Enormous numbers are involved: trillions of passenger miles, trillions of dollars, hundreds of millions of automobiles. Such factors are all so massive, so entrenched, so set in their ways, that our ability to change anything is hindered until these special interests are forced off of their position or are constrained until they find some alternative to their rigid self-interest position.

National efforts to evolve an energy policy are a good example. We have known that petroleum supplies were running out ever since we used that first barrel. Fundamental economic law tells us that; when demand overtakes supply, prices are going to go up. Right now our society is captive to the automobile. If automobiles were only a luxury, if we used our cars only for vacations and other relatively incidental purposes, like Rent-a-Car, we could cut back the demand quite simply. But we need the automobile to get to work, to get to the store, to go to church, and for thousands of other essential, nonreducible purposes. Energy policy is tied to the demands of the auto, and at the present time, it is relatively immobile. We have observed, since the so-called Arab embargo of 1973-74, the utter inability of our system of government to come to grips with these massive problems.

In this national climate we have seen a steady and accelerating increase in the demand for rail travel. We are seeing the power of another pressure group—this time the public themselves—as it is applied to a transportation alternative.

This is no place to get into a detailed account of the relative fuel consumption of various modes of transport. However, it is important to present a reasonable account of rail passenger train fuel consumption versus the automobile to show the magnitude of that difference when applied on a national scale.

The Office of Technology Assessment in February 1979 reported that the national average rate of gasoline consumption of all automobiles in 1975 was 13.5 miles per gallon. It reports that the 1985 objective for all automobiles is 19.4 mpg. We can safely say that the present average is somewhere in between; for comparative purposes, let's use 17 mpg.

The U.S. Department of Transportation reported, in 1977, that the average passenger load for automobiles in intercity travel was 2.2 passengers. Again, for comparative purposes, this would give us a reasonable 35 passenger miles per gallon figure for all automobiles in average intercity use.

In a most important sense, this figure of 35 pm/g ought to be made the base of a national energy conservation structure. Any vehicular operation for passenger transport below that figure should be transitioned out of the system, and any operation above that figure should be encouraged. The total gross savings in gasoline would be enormous. I have already stated that aircraft fuel efficiency can be 36.2 to 62.1 pm/g for the Boeing 727 and the Boeing 747, respectively, and that intercity bus efficiency can be 287 pm/g. Both are, on that basis, superior to the average automobile.

At the same time, the energy effectiveness of a current model Amtrak train configured with one locomotive and eight Amfleet cars (two of which are cafe cars) carrying 600 passengers is 400 pm/g. A similar train with two locomotives, 18 cars (three of them cafe cars) and carrying 1,400 passengers can produce 500 pm/g. The eight-car train can be 11.4 times more efficient than the average automobile and the 18-car train can be 17.5 times more efficient. These data are computed from the manufacturer's manual and are derived from standard conditions; therefore, even if operational exigencies cut these figures in half, we still would find that every train operated to carry hundreds of passengers provides an immediate and very significant fuel saving.

It is important to add that one of these 18-car trains with 1,400 passengers could replace 636 automobiles on a crowded highway, and that 636 automobiles traveling at 55 mph would make up a line about 20 miles long. Think what 10 trains, 100 trains, or 1,000 trains would mean in fuel conservation and highway decongestion all at one time. These are the kinds of figures transportation planners must be looking at today.

Does 1,000 trains sound unreal? There used to be 20,000 passenger trains a day in this country when the population was half what it is today. In Germany today—

"20,000 Amtrak trains carrying 28 million passengers 200 miles a day would save 76 million gallons of gasoline."

an industrialized country with a very good road network, plenty of automobiles, and good air service—there are nearly 20,000 passenger trains per day. As an example, what would 20,000 Amtrak trains carrying 1,400 people provide in the way of gasoline savings? These trains could carry 28 million passengers and replace 12.7 million automobiles. At an average of 200 miles per day, they would save more than 76 million gallons of gasoline. If the trains ran one-half full, that would save 38 million gallons per day. This is a structured example, but it does give a reasonable idea of what can be done with a positive shift to rail travel.

Those of you who have noticed that Amtrak has increased its ridership by 10%, even 20% (in some places more), may not have known that these gains in ridership have been made despite a limited, or fixed, capacity system. Amtrak had nearly as many marketable seats in 1971 as it has today, and its equipment is getting older.

Amtrak is like a stadium. It has a fixed capacity. Once you get the stadium filled, or nearly filled, the potential for a percentage increase at each following game disappears. At the very time when the trains are doing better than ever, the chance to show a rate of increase is nearly foreclosed. Right now this is hurting our public image, because we cannot show in our ridership statistics the magnitude of the demand.

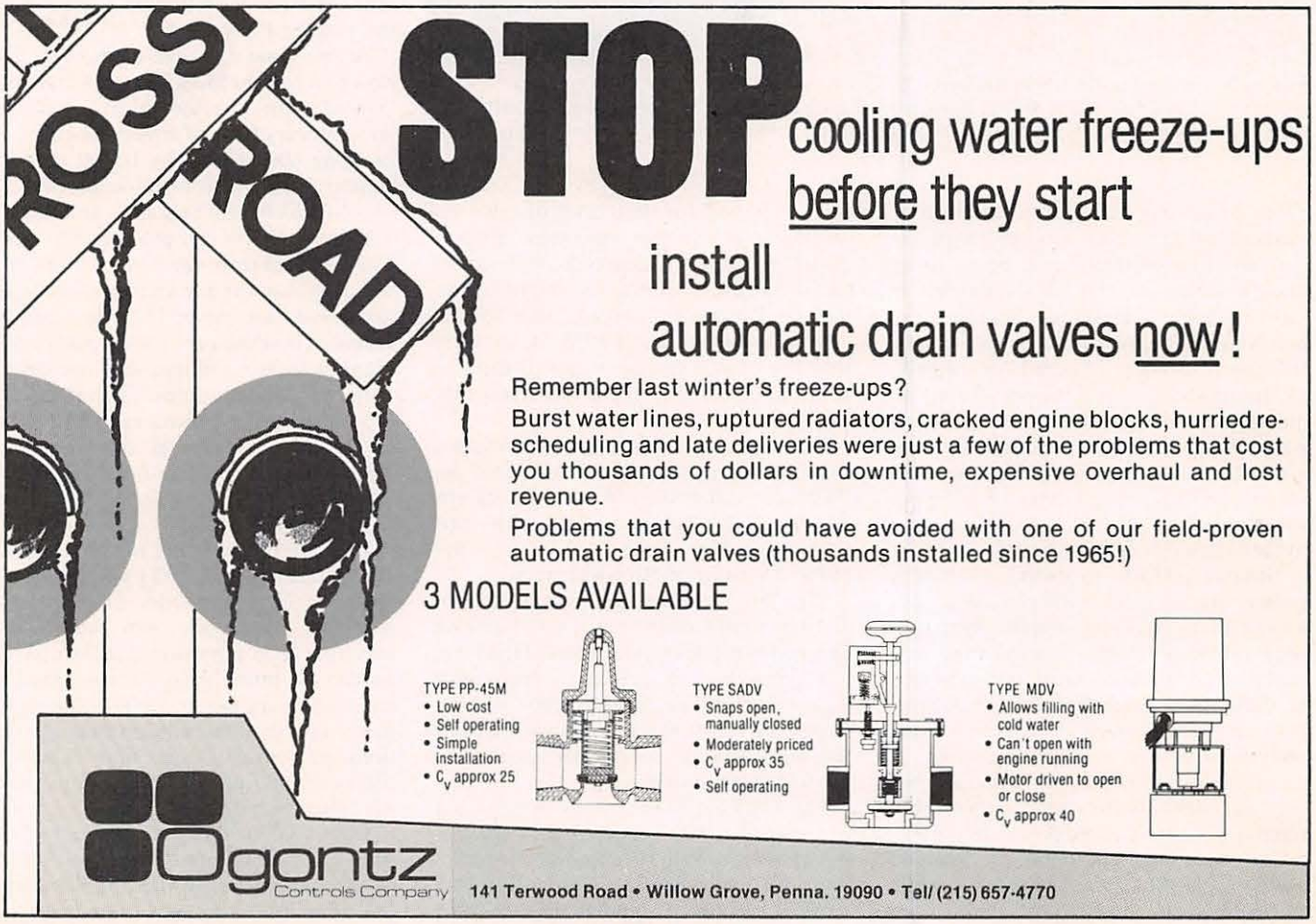
One of the biggest problems facing Amtrak, therefore, is to get more cars, more seats to sell. This is a compound problem: We need the cars, but first of all we must have an industry to manufacture them. There is no place in this country today where you can buy modern rail passenger cars off the shelf or from an up-to-date production schedule. When the railroads were planning to do away with rail passenger service, they stopped ordering passenger cars. As a result, very few cars were ordered and manufactured after the 1950s. For 20 years there have been no appreciable orders for rail passenger cars. Those once great companies which made a living designing, developing, and building the best cars in the world have gone out of that business. Not long ago, Pullman Inc. announced it would no longer manufacture passenger cars. This is important, but even more important has been the demise of the subcomponent manufacturing industry.

These smaller companies which made the essential parts for railroad cars—the prime manufacturer is generally responsible for only about 50% of the total job—are the ones who do most of the research and development. They design better brakes, better air conditioners, better doors, better kitchens. They went out of business, and all of that research and development went with them. We have lost a generation of improving technology.

My primary concern since I have come to Washington has been to explain to Congress and to the Administration that Amtrak must be given sufficient multi-year funding to make it possible to revitalize this important industry. I believe we have been successful and that we shall have these funds.

It has been traditional for the railroads to work closely with banks. I now see a major new industrial rebirth of the rail passenger car manufacturing business just over the horizon. There is no reason why we should have to go overseas to find a good share of what we need for locomotive power, for passenger cars, and for the thousand and one other items essential to our business. But that is what we have had to do since Amtrak began back in 1971.

We need a healthy industry here at home, and it would benefit the balance of trade with the rest of the world if we were


STOP cooling water freeze-ups before they start
install
automatic drain valves now!
Remember last winter's freeze-ups?
Burst water lines, ruptured radiators, cracked engine blocks, hurried rescheduling and late deliveries were just a few of the problems that cost you thousands of dollars in downtime, expensive overhaul and lost revenue.
Problems that you could have avoided with one of our field-proven automatic drain valves (thousands installed since 1965!)
3 MODELS AVAILABLE
TYPE PP-45M
• Low cost
• Self operating
• Simple installation
• C_v approx 25
TYPE SADV
• Snaps open, manually closed
• Moderately priced
• C_v approx 35
• Self operating
TYPE MDV
• Allows filling with cold water
• Can't open with engine running
• Motor driven to open or close
• C_v approx 40
Ogontz Controls Company
141 Terwood Road • Willow Grove, Penna. 19090 • Tel/ (215) 657-4770
Circle 47 on Reader Service Card

"Because track is private property, we shall have to find a way to negotiate with the owners to improve it."

using our own dollars here and exporting rail passenger cars instead of importing them. We are going to have to have sources for what we need, and I am told the mass transit and commuter operators are faced with the same problem. This looks to me as though the banks ought to look into this business and see if we, the government (federal, state, and local) and the commuter and mass transit groups can all get together to create a healthy, competitive, passenger car manufacturing industry right here at home. We would be much further along today with the rebuilding of the intercity rail passenger system now if we had been able to replace our fleet of ancient cars years ago and if more new cars were coming on line day by day as this demand continues.

I am sure the requirements for cars will increase with the years and with the growing severity of the energy crunch. Many of you will be approached by these businessmen. There will be a good opportunity for many banks in the rebirth of this industry. (You may be interested to know that the company responsible for this type of production in England is British Rail Engineering Ltd. With a gross income, in 1977, of more than $500 million, it consists of 13 major facilities; it employs 35,000 people; and in addition to filling the demands of the British Rail system, it sells its fine products in many overseas markets, helping England's balance of trade. Amtrak has nothing at all like this except for our maintenance facilities.)

I cannot close without some mention of track requirements for passenger train operations. No one would consider operating autos, trucks, and buses without good roads and bridges, nor would anyone consider operating aircraft without airports and airway facilities. These operators all operate on public property; their needs are well understood, and to a great extent the government provides them. On the other hand, Amtrak operates, for the most part, on private property.

It continues to surprise me that whenever Americans think about trains and train travel, they rarely take into consideration the important role played by the privately owned track. The track is a guideway. It must be level. It must be standard and accurate gauge. It must be bolted firmly to ties which are firmly embedded in the ground so it will not move under the train, "kink" in the hot sun, or break apart in severe cold. It must be banked, or superelevated, on curves. The ride you enjoy, or do not enjoy, on a passenger train is primarily the result of good, or bad, track design, construction, and maintenance, in that order. And all of this is paid for with private funds and not by the government, with very few exceptions.

In this country almost all of the 300,000 miles of track is owned by the freight railroads and they have designed this track for the operation of heavy freight cars, long freight trains, and relatively slow speed. This configuration is not always compatible with the higher standards required for passenger train operations. As a result, Amtrak's trains run very slowly, and their speed, over the past eight years, has been getting slower because of the declining condition of the track. Slower, very often, means less reliability and less comfort. This is a complicated and very technical issue. Because track is private property, we shall have to find a way to negotiate with the owners to improve this situation. This is a long-range, most important project.

To put these pieces together:

This country can no longer afford to place primary dependence for intercity passenger transportation upon a mode of travel which delivers, on gross average, only 35 passenger miles per gallon—and we need to keep in mind that it does even worse than 35 pm/g in local driving. ■

STARTING DEPENDABILITY
WITH GBC

UniBatt®
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Two UniBatt batteries will replace eight standard batteries for diesel starting and accessory service. They supply plenty of cranking power and high reserve capacity for dependable, low-maintenance operation. Four way fork lift access simplifies handling.

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Hi-Roller batteries deliver greater diesel-cranking speeds for fast, sure starts, even in cold weather. And they have the extra potential that can supply overnight power for auxiliary equipment. Rugged construction and high impact containers contribute to long, low-maintenance service life.

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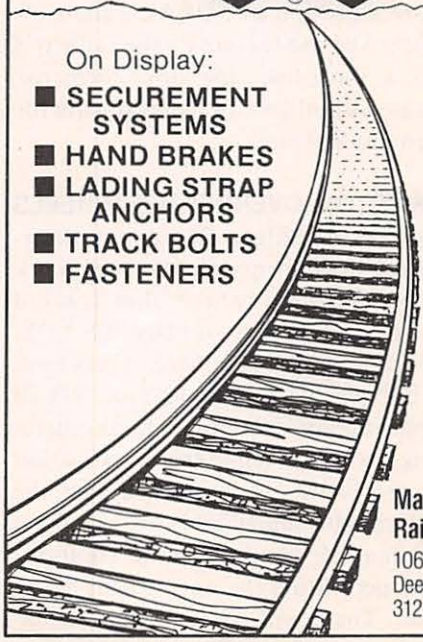

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Railway Division
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Deerfield, IL 60015
312/945-4590

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Moving People

HOT TOPIC FOR APTA MEETING: ENERGY

The energy crisis will be much on the minds of transit people as they gather in New York City for the annual meeting of the American Public Transit Association Sept. 23-26. "Coping with the Deluge: Transit Operations in an Energy Crisis" will be the theme of a breakfast workshop Sept. 24 moderated by Edward A. Harvey, senior vice president, ATE Management & Service Co., Cincinnati. George Krambles, executive director of the Chicago Transit Authority, will lead a discussion on energy conservation techniques. Later the same day, a session on "Transit, Public Policy, and the Energy Crisis" will be conducted by Houston P. Ishmael, president of APTA and executive director of the Memphis Area Transit Authority. Among the speakers at this session will be Thomas Tatum, a specialist in conservation and solar power with the U.S. Department of Energy. Altogether, 31 separate sessions, many of them running concurrently, are scheduled during the meeting. General-session speakers include David Bayliss, chief transportation planner for the Greater London Council in England; Congressman James J. Howard, chairman of the House Subcommittee on Surface Transportation; and New York Gov. Hugh Carey.

ICC CLEARS WAY FOR SAN DIEGO LIGHT RAIL

Construction of a 16-mile light rail line from downtown San Diego to the border towns of Tijuana and San Ysidro is now scheduled to start in February 1980, and the line is expected to go into operation sometime in 1981. The last major hurdle was cleared Aug. 22 when the Interstate Commerce Commission approved the sale of Southern Pacific's San Diego & Arizona Eastern Railway to the Metropolitan Transit Board for $18.1 million. The new light rail line will utilize a portion of SD&AE's right-of-way. The ICC also approved the leasing of the railway's freight operations to a short-line operator. Siemens/Duwag of West Germany is building 14 light rail cars for the line at a cost of around $10 million.

DERAILMENTS BLAMED ON OVERHEATED WHEELS

The National Transportation Safety Board has determined that four separate derailments on the New York Transit Authority were caused by wheels that cracked from overheating. The first derailment, on Dec. 12, 1978, resulted in injuries to 22 persons. The three others took place after the NTSB opened its investigation. NTSB found that partial application of handbrakes had contributed to the overheating problem. While the investigation was still incomplete, the board recommended that the wheels of all New York cars be immediately inspected for thermal damage, and that all handbrakes be equipped with positive indicators permitting the operator to determine a brake's position. The board's final recommendation is that New York's Metropolitan Transportation Authority require NYCTA to establish an inspection procedure that will detect overheated wheels before failure.

MARTA STARTS WORK ON AIRPORT STATION

Work is now under way on the shell structure of the Metropolitan Atlanta Rapid Transit Authority's Airport Station at the southernmost end of the 53-mile system. The rail transit station will be tied to the new midfield air terminals now under construction. It will occupy a two-acre site about nine miles south of the Five Points Station, hub of the MARTA system. The architects have designed the rail station to blend with the new air terminals. The concourse areas for the rail and air terminal buildings will be on the same level. MARTA estimates that by 1995 the Airport Station will be used by 40,000 passengers daily, with a peak-hour load of 4,900 passengers.

N.J. DOT SEEKS 78 PUSH-PULL CARS

The New Jersey Department of Transportation says it will seek bids "in the near future" for 78 push-pull cars for service on Conrail's Raritan Valley Line, the former main line of the Jersey Central. Included will be 65 131-passenger coaches and 13 110-passenger cab cars. The equipment will be paid for through TRANSPAC, a $600-million joint venture of the Port Authority of New York and New Jersey and the federal government. Later this fall, N.J. DOT will advertise for the services of a consultant firm to serve as a liaison between the carbuilder and the state DOT to insure that the equipment is constructed to specifications.

SEMTA RAIL RIDERSHIP UP SHARPLY

The Southeastern Michigan Transportation Authority reports that 38,374 passengers rode its Silver Streak commuter trains between Pontiac and Detroit in July of this year—an increase of 24.1% over the 30,918 passengers carried in July 1978, and an increase of 62% over the July 1977 ridership of 23,675.

BRITISH RAIL ORDERS 236 SLEEPERS

The British government has authorized British Rail to acquire 236 new Mk III sleeping cars at a total cost of around $80 million. The cars will be built by British Rail Engineering at Derby starting in October 1980; the order is to be completed in mid-1982. Around half of the cars will have 13 compartments; the remainder will have 12 plus an attendant's compartment. The design will permit the compartments to be converted to either single berth (first class) or double berth (second class) at short notice. "With full air-conditioning, double-glazing, effective sound-proofing, and air-cushion suspension, the sleepers will be the quietest and smoothest-riding sleeping cars ever to go into service with BR," says the railroad.

Nothing missing!

The kit you receive is custom packaged—to your specifications. The contents are products of high quality manufactured by Ex-Cell-O, Uniroyal, and other leading companies. The next time you need locomotive truck repair parts, why not order a "customerized" kit from us and find nothing missing.

All the parts are individually packaged and clearly labeled. We left out inventory problems, delivery worries, and the hassle of over and under stocking.

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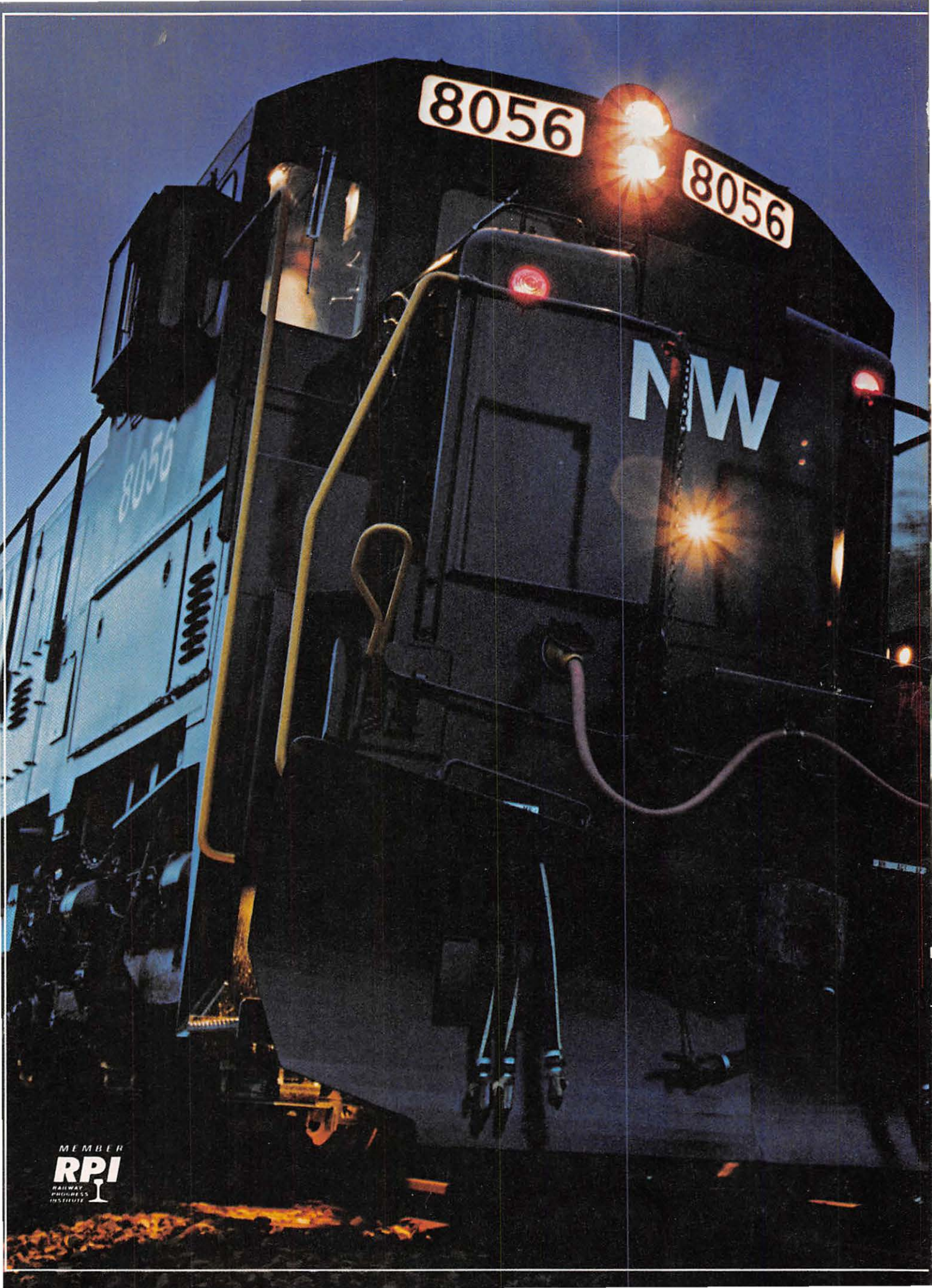
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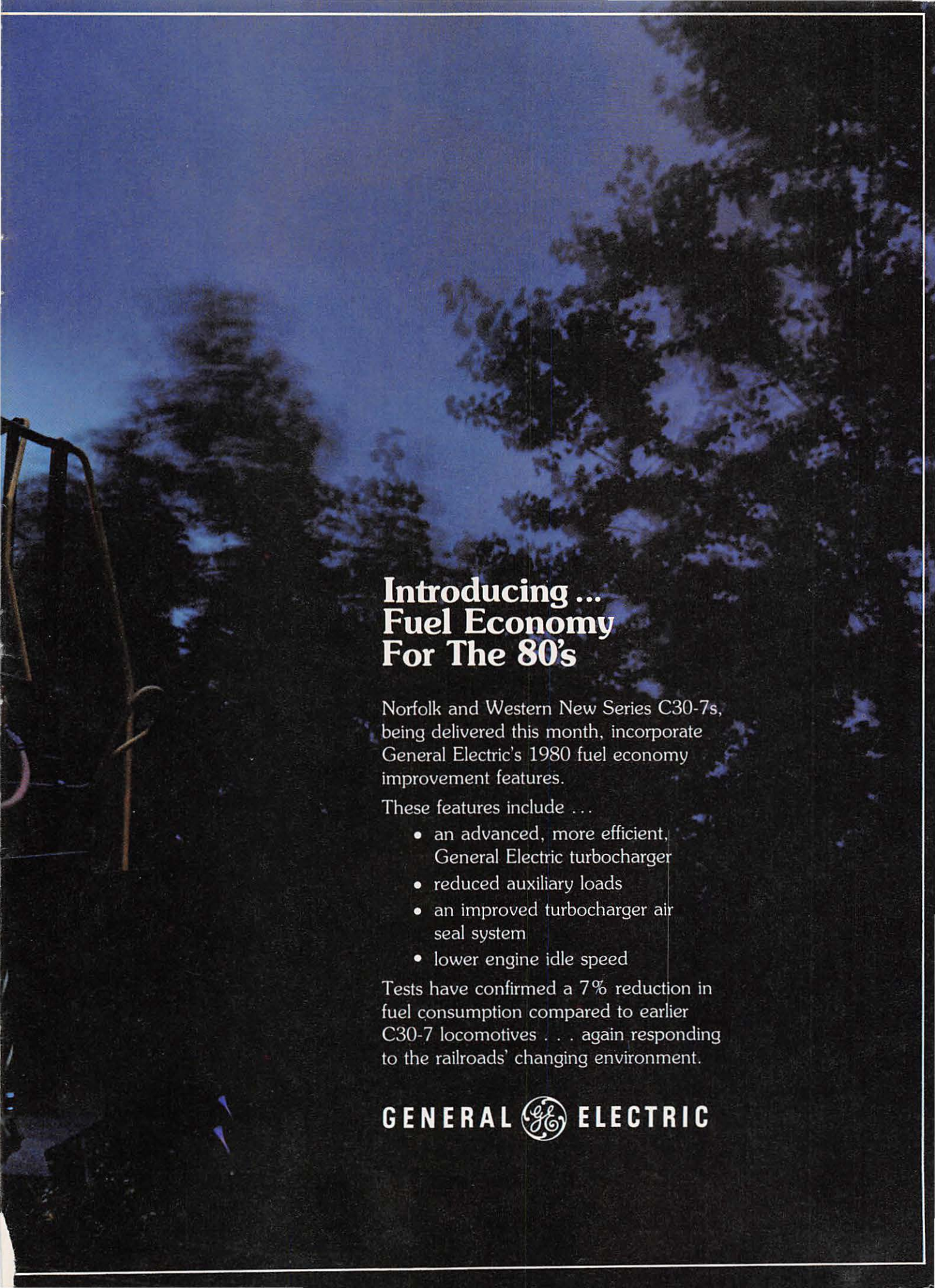


Introducing ... Fuel Economy For The 80's

Norfolk and Western New Series C30-7s, being delivered this month, incorporate General Electric's 1980 fuel economy improvement features.

These features include ...

- an advanced, more efficient, General Electric turbocharger
- reduced auxiliary loads
- an improved turbocharger air seal system
- lower engine idle speed

Tests have confirmed a 7% reduction in fuel consumption compared to earlier C30-7 locomotives . . . again responding to the railroads' changing environment.

GENERAL ELECTRIC

2491
79P1
70F2

In Microwave Radio

The best system for you is one of a kind. Our kind.

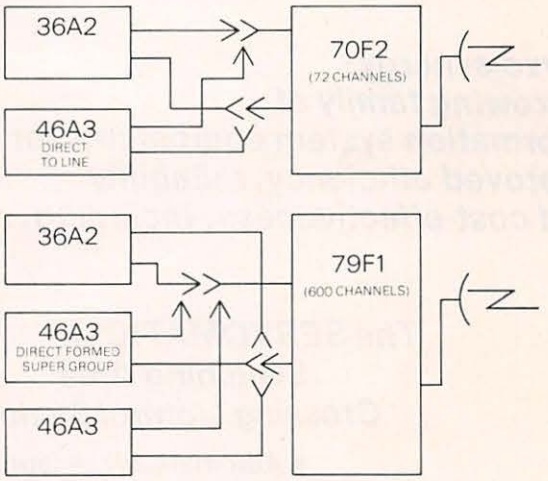
The most efficient and lowest cost microwave radio network for you takes advantage of the best features of all types of radios. Essentially, the system you need is a custom-built system—custom-built around your needs. That's where our more than 20 years' experience in microwave radio can help you meet utility, railroad, pipeline or telephone needs.

The 79F1 and 70F2 Microwave Radios are the heart of our 2-GHz baseband-type microwave radio systems. They are the state-of-the-art ideal for both light and medium channel capacity routes as well as for networks which require dropping and insertion of VF channels at repeater sites.

The 79F1, with up to 600 FDM channels, is a compact transmitter-receiver assembly designed for high performance fixed-station operation. With three different power options and low total receiver noise, the 79F1 is particularly suited for both backbone transmission and spur drops off heavy routes—such as railroads—where reliability is paramount. For example, a microwave radio system for railroad applications would feature the 79F1 radio combined with the 36A2 Multiplex, allowing the capability to drop any amount of channels at any remote site location such as a railroad switching yard or hot box detector location. This combination is ideal for any system requiring a few channels going to many locations.

An advanced system, the 79F1 eliminates the need for specialized test equipment through its built-in test features. Other innovations which make the 79F1 a superior radio system are built-in baseband with dual input and output ports, threshold extension, and programmable AFC circuitry.

The 70F2, with up to 72 FDM channel capacity, is the ideal radio for spur route or light-route backbone applications. A typical application would be the 70F2 with a 36A2 Multiplex serving as a spur link for a 79F1/46A3 Multiplex combination backbone route. The 70F2 offers built-in baseband comprehensive alarm and test features, low noise, low price and small size. Both single-channel and hot standby arrangements are available.



Whatever your application, whatever your needs in microwave radio, GTE Lenkurt has the one answer for you. Like the system you need, it's one of a kind. Call or write: **GTE Lenkurt, Incorporated,** Dept. A134, 1105 County Road, San Carlos, California 94070. (415) 595-3000.

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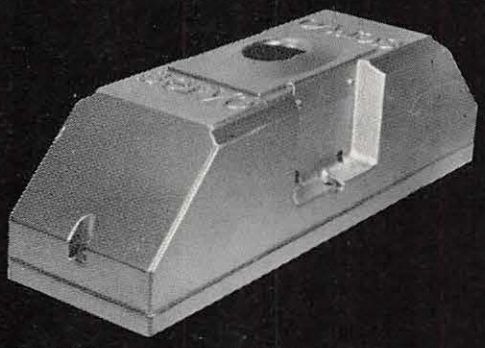
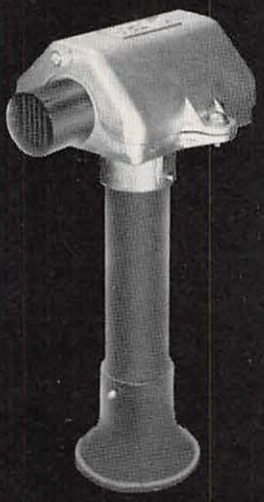
Look for our display booth at the Association of American Railroads Convention in Chicago September 19-21. We'll be there.

GTE **Communications Transmission Systems**

Servo synergy is



Servo's new Model 8909 Hot Box Detective® features "Kinetic Design" scanners for heavier loads and higher train speeds.

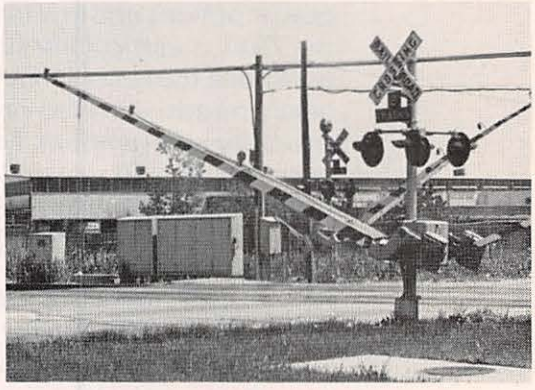


Hot Wheel Detective® spots overheated wheels caused by stuck brakes.

Servo synergy:
A growing family of information system equipments for improved efficiency, reliability and cost-effectiveness, including...

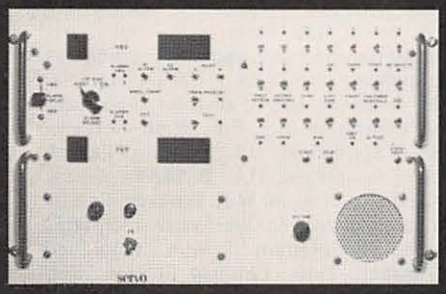
The SERVOMATIC® II Switching Area Crossing Control System

- ***Automatically determines train direction***
- ***Times and actuates gates and flashers... ONLY WHEN NECESSARY!***
- ***Eliminates traffic tie-ups***

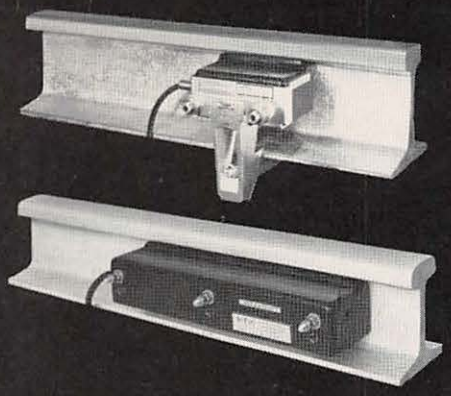


How to provide dependable crossing control at busy industrial switching areas—and, at the same time, avoid unnecessary traffic delays if the train should stop or move *away* from the crossing? The SERVOMATIC II system combines reliability, design simplicity and economic feasibility while solving the problem. Control action is triggered and timed when the train moves *in the direction* of the crossing. If the train *stops,* or moves *away* from the crossing, the control is timed out to terminate the signals and permit access to the crossing by auto and pedestrian traffic. Switching operations are more efficient. Crossing downtime is minimized, and manual supervision is not required.

working on the railroad



SERVOTALK™ Train Inspection Reporter warns crew of defective conditions via instant radio messages.



SERVOPOLE® and SERVOTRIP® Rail-Mounted Magnetic Sensing Transducers.

SERVOLARM® Trackside Visual Display Board shows location of defective condition; eliminates train stops.

SEE US AT THE CHICAGO SHOWS!

Mechanical Railroad Show	AAR C&S
Sept. 15-19	Sept. 19-21
Booth 184	Booths 25-26-30

The SERVOMATIC II system operates in conjunction with conventional island track circuits. The use of long-life, carefully tested components assures trouble-free operation with minimum maintenance. Modular "building block" design facilitates system application to the simplest or the most complex crossings with an unlimited number of tracks or control positions. Recommended for crossing areas where train speeds range from 1 to 25 mph, the system requires only a small signal case to house the compact electronic components.

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People in the News

CHICAGO & NORTH WESTERN.—Donald C. Bergquist, general sales manager-Central, Chicago, named assistant vice president-grain marketing and pricing, to replace **James R. Feddick,** resigned. Mr. Bergquist's successor is **John P. Toren,** general market manager.

George F. Maybee, assistant vice president and division manager, Western division, transferred to the Iowa division, Boone, Iowa. Mr. Maybee's successor is **William R. Otter, Jr.,** assistant division manager-transportation/administration, Western division.

FAMILY LINES SYSTEM.—Robert C. Becker, director of marketing for construction materials, Jacksonville, Fla., named director of marketing for phosphates and fertilizer. **Thomas B. Cash,** manager of sales for construction materials, replaces Mr. Becker as director of marketing.

A. Pat Torbett named district sales manager, Dallas, Tex.

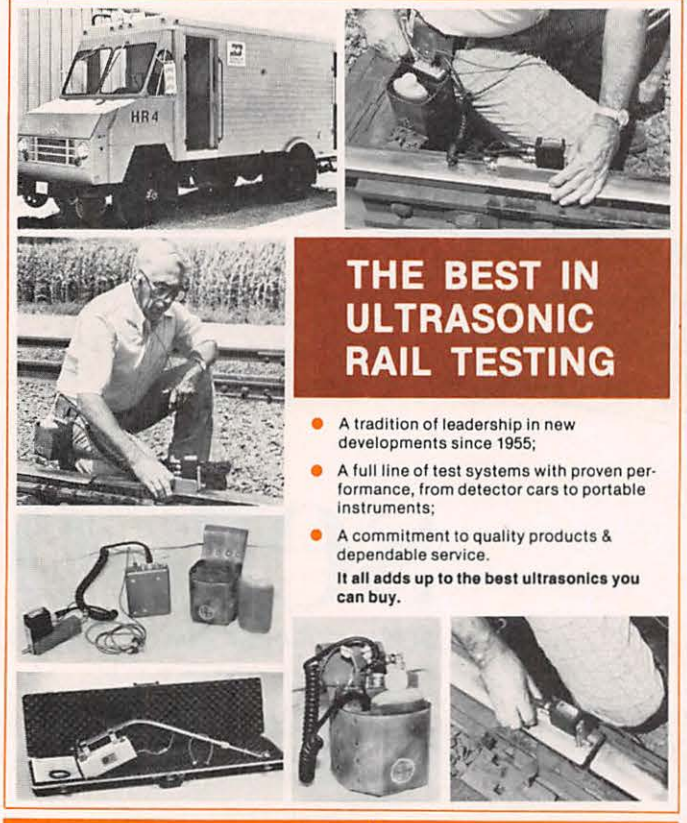
FLORIDA EAST COAST.—R.L. Hines, manager-pricing, appointed general manager-pricing, St Augustine, Fla., succeeding **L.P. Schmitt,** who retired July 31 after 31 years with the FEC.

M.O. Bagley appointed assistant manager industrial development.

FRISCO.—Named the following assistant general managers to head three newly established operating districts: **R.A. Rorie,** Central District, Springfield, Mo.; **J.C. Cowles,** Western District, Tulsa, Okla.; **R.L. Akins,** Southern District, Memphis.

Announced concurrently the systemwide appointments of **R.S. Fuller** as general superintendent transportation and **L.E. Eldredge** as superintendent rules, both at Springfield.

The following named division superintendents: Central District, **F.E. Wait,** Northern division, Springfield; **D.L. Starling,** Eastern division, Springfield; **H.L. Buckner,** Kansas City Terminal division; **W.R. Wallace,** Springfield Terminal division. Western District, **W.F. Deaton,** Southwestern division, Tulsa and **D.E. Baker,** Tulsa Terminal division. **B.J. Lutzenberger** continues as superintendent, Western division, Tulsa. Southern District, **J.K. Vaden,** St. Louis Terminal division and River division, St. Louis; **C.B. May,** Southern division, Amory, Miss.; **M.M. Brower,** Birmingham Terminal division. **E.H. Harrison** continues as superintendent, Memphis Terminal division. *(Continued on page 111)*



THE BEST IN ULTRASONIC RAIL TESTING

- A tradition of leadership in new developments since 1955;
- A full line of test systems with proven performance, from detector cars to portable instruments;
- A commitment to quality products & dependable service.

It all adds up to the best ultrasonics you can buy.

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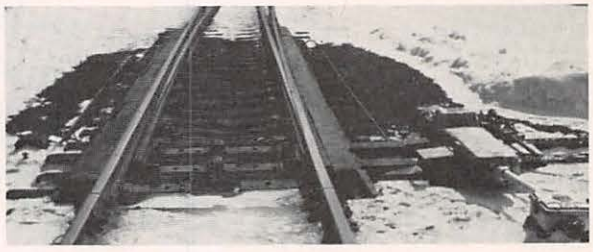
Keep switches clear of snow and ice!

RAILS COMPANY

SWITCH HEATERS



Whatever type of switch heater you need, we make it:
- Type HAB-HP high pressure blower models...oil fired, natural gas, propane or all electric.
- Type LP low pressure natural gas models.
- Type RTS propane gas models.
- Type TH tubular electric models...all voltages and wattages.
- All available for dispatcher control or automatic operation with Rails Company Snow Detector.

Write or call for full information.

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Let Stanray's hot new cooler quench your upkeep costs.

It's the new "Vari-Volt"...a combination water cooler and refrigerated food compartment designed to cool the crew's thirst and your maintenance costs.

For use in all EMD locomotives, the brand new "Vari-Volt" unit withstands hard day-to-day use and meets AAR clean cab standards (phase 2).

The unique AC-operated "Vari-Volt" Cooler eliminates the use of DC motors, brush replacements, V-belts, and costly inverter systems that make many railroad coolers high-maintenance items.

Equipped with a semi-hermetic compressor and a specially designed 3-phase motor, the new cooler is designed to operate over a wide range of voltages and frequencies.

When it comes to innovative thinking, quality and durability in products for the railroad industry, no one does it better than Stanray. Since 1889.

Call for your Abex/Stanray representative for full details on the new Stanray unit. It can go a long way towards cooling your maintenance costs.

Stanray. A total commitment to quality.

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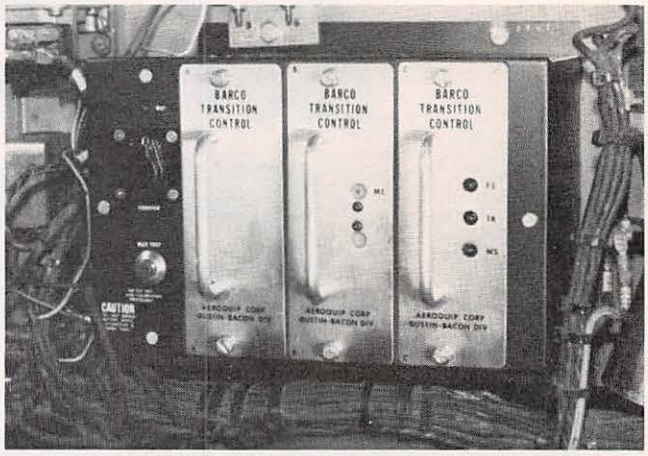
From Gustin-Bacon...

NEW! Barco® Transition Control



Get precise, easy-to-maintain locomotive transition control and speed indication in one compact system.

The Barco transition control, available in 3-step and 9-step models for controlling transition in a broad series of locomotives, senses locomotive speed at the axle, processes the information electronically and initiates transition at preset, but adjustable, speeds. Provision for detecting axle overspeed is standard with all units.

Transient protected solid-state electronic circuitry eliminates the need for expensive hard-to-maintain forward transition and backward transition relays, program switches, electro-mechanical time delays (FSD) and the associated calibration resistors and wiring.

Test circuits built into the Barco transition control allow on-board checkout in a matter of minutes. Though usually unnecessary, the system can be completely recalibrated in a tiny fraction of the time formerly required with voltage and current sensitive transition relays. With the Barco transition control, load testing to calibrate transition is a thing of the past.

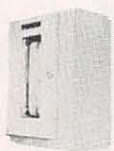
Plug-in printed circuit boards simplify maintenance of the Barco transition control and reduce spare part requirements.

The Barco transition control will operate with either the standard Barco axle drive or the 20 cycle per revolution GE axle alternator when so specified.

Single or dual Barco electronic speed indicators and recorders can be driven by the transition control in this truly versatile system.

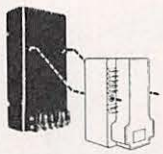
Why not send for Product Bulletin No. 9012 on the Barco transition control right now. Aeroquip Corporation, Gustin-Bacon Division, 500 N. Hough St., Barrington, Ill. 60010, *a subsidiary of Libbey-Owens-Ford Company.*

From the whistles of the past come the signals of the future... Barco Electronic Products



Barco Locomotive Performance Verifier—records performance during all periods when the locomotive is asked to produce full horsepower.

Barco SIS 400 Speed Information System—the most advanced and reliable electronic speed indicating and speed recording system available. Options include: remote indication, overspeed control and dual range indication.



Barco Automatic Reset for Ground Protective Relay—automatically resets after nuisance type grounds—locks out for protection from serious trouble.

Barco Electronic Recorder—records critical information (up to 8 events) for your mechanical and operating departments.

Barco Big 8″ Dial Speed Indicator—eliminates parallax. Can be read from anywhere in the cab.

See us at Booth No. 196, Mechanical Railroad Exhibition in Chicago

Aeroquip

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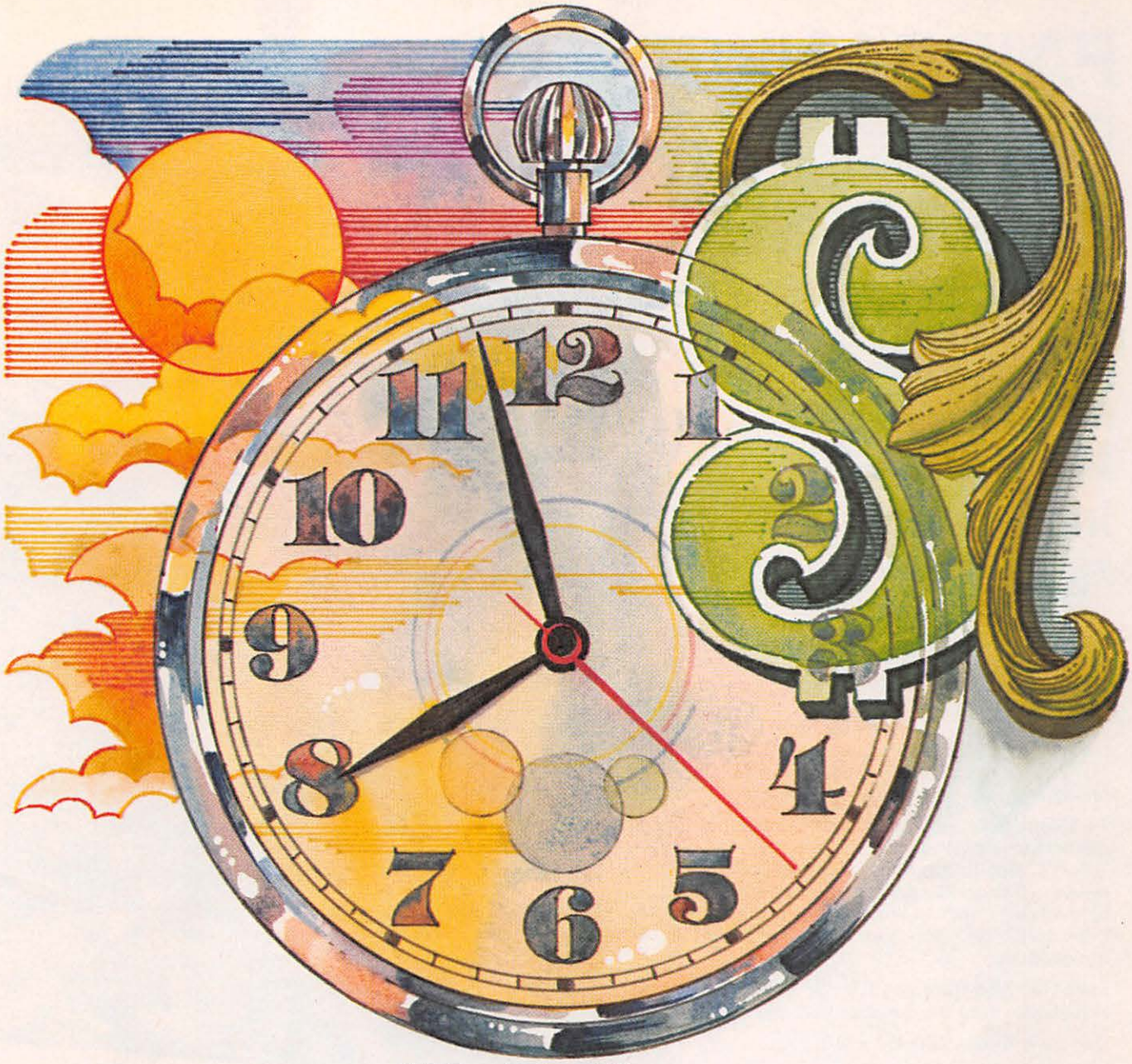

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A total grade crossing system; economical, on-time and with complete after-sale service.

We deliver a system you can rely on. We manufacture 95% of the components we use in every installation, from the aluminum housings to the lenses, gate arms, nuts and bolts. So rest assured each piece is tested and retested, before it's even installed. And the fact that we manufacture our components accounts for two other important deliveries.

We deliver a top-quality system for a substantially lower price. We don't have to rely on other suppliers and the "going market price" for many of our components. That keeps our costs down, which in turn, saves you money. But saving time is just as important as saving money, right?

We deliver installations on-time. We control the supply of our components, so we can adjust our projections and production to meet demands. We'll always have an accurate delivery date for your installation right at our fingertips. But we don't wash our hands of a system once it's installed.

We deliver 24-hour service. Our regional sales (often located in your General Office area) and engineering staff is on call night and day. Should a problem arise, pick up the phone. If we can't solve it over the phone, working with your staff, our people are on the way. Right away.

A total grade crossing system that's extremely reliable, that costs you less, that can be delivered when you want it and serviced when you need it. That's why Safetran is the #1 manufacturer of automatic grade crossing systems in the country. We deliver.

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FAIRBANKS® SELF-CONTAINED TRACK SCALES

New Ease In Installation

Now you can install a field-proven Fairbanks Track Scale in a week. Our new self-contained electronic scale modules make it possible.

Slash installation costs by eliminating costly pit construction. The scale modules are installed on a tamped aggregate base to speed installation. Also minimizes line down-time and re-routing. You can relocate the scale in the future if your traffic flow changes. Fairbanks Self-Contained Track Scales make modern digital weighing more practical and versatile than ever before.

Fairbanks Self-Contained Track Scales join the performance-proven line of Fairbanks Railroad Track Scales to accommodate a wide range of weighing needs. Mechanical or electronic, full pit or shallow, Fairbanks Track Scales provide accurate weighing, for tariffs and commodity transactions.

Fairbanks Self-Contained Track Scales — new installation ease for quick project completion.

Call us, toll free: **800-451-4107**

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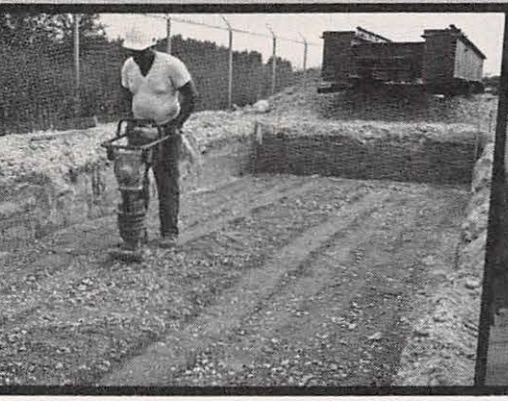
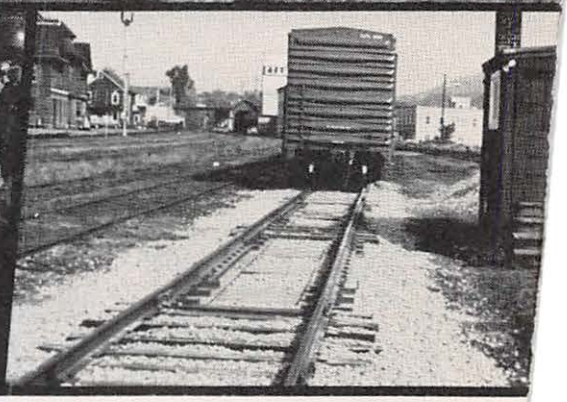


Self-contained scale modules eliminate pit to speed installation.

Rugged scale sections are easily positioned to speed installation.



Quick installation gets your scale on line in a hurry.

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Weighing Division

R.E. Townes becomes assistant superintendent-general agent-mechanical foreman, Wichita, Kans., and **T.L. Sullivan,** assistant superintendent-general agent, Hugo, Okla. Named assistant superintendents are **R.G. Baumgartner,** Chaffee, Mo.; **R.E. Carr,** Memphis Terminal division, and **R.E. Tyndall,** Springfield Terminal division.

Trainmaster-general agents named are: **G.F. Rischmueller,** Fort Scott, Kans.; **J.B. VanHouden,** Fort Smith, Ark.; **J.D. Yeager,** Fort Worth, Tex. Division trainmasters named are: **T.L. Bourzikas,** Memphis Terminal; **W.H. Davis,** Springfield Terminal; **G.M. Hooten,** St. Louis Terminal; **J.P. Kay,** Kansas City Terminal; **G.M. Kirk,** Birmingham Terminal. **R.M. Hardwicke** and **C.E. Hurt** named trainmasters, Springfield and Oklahoma City, respectively.

MARYLAND & DELAWARE—VIRGINIA & MARYLAND.—A.R. Ouslander, vice president and general manager, M&D, Federalsburg, Md., appointed also vice president and general manager, V&M. **L.M. Nottingham** appointed trainmaster-general agent, V&M at Cape Charles, Va.

NORFOLK & WESTERN.—William L. Allman, Jr., named director labor relations-maintenance crafts, Roanoke, succeeding the late **J.W. Fox.** Mr. Allman had been assistant director. **Ray Curtis Steele, Jr.,** assistant general attorney, named manager labor relations. **Shari Cohen Kaplan** promoted to assistant rules supervisor. **Walter F. Corns,** assistant director labor relations, Cleveland, transferred to Roanoke.

Harold D. Amick, assistant director labor relations, Western Region, St. Louis, named director labor relations there, succeeding **Robert L. Prange,** retired. **Dale H. Mullen,** manager recruiting, Roanoke, succeeds Mr. Amick as assistant director labor relations at St. Louis. **Richard L. Dean,** assistant manager, equipment planning, Roanoke, succeeds Mr. Mullen as manager recruiting.

PENINSULA TERMINAL.—Dennis L. Benscoter has joined this division of National Railway Utilization Corp. as general manager. He was formerly auditor and traffic consultant, AM-PAC Forest Products, Portland, Ore.

ROCK ISLAND.—J. Otis Cathey named assistant vice president-sales and **William F. Hartigan,** general sales manager.

SANTA FE.—Robert E. Welk, assistant to the president, Chicago, named vice-president-executive representative, with headquarters in San Francisco and offices in Los Angeles. **John W. Barriger,** assistant vice president-finance, named assistant to president.

Leighton L. Broxterman, assistant manager-labor relations, Chicago, named manager-labor relations there, to succeed **Edwin D. Cummings,** who retired Aug. 1 after more than 36 years' service.

SEABOARD COAST LINE.—Garland F. Chick, assistant superintendent, Savannah Ga., appointed superintendent, Jacksonville Division of Jacksonville, Fla., succeeding **John W. Thomas,** named general manager, **Clinchfield.**

SOO LINE.—Lyle T. Bosacker named director of management information systems. Mr. Bosacker was formerly executive director of the data center, **Federal Intermediate Credit Bank,** St. Paul. **George W. Guthrie,** director of management information systems, appointed executive assistant, Executive Department. Both will have headquarters in Minneapolis.

SOUTHERN.—Robert E.L. deButts, general solicitor, Washington, D.C., named assistant vice president-law.

SOUTHERN FREIGHT ASSOCIATION.—John T. Rumbley, chairman, Standing Rate Committee, Atlanta, Ga., appointed vice chairman of the Association. **John O. Bond,** member, Standing Rate Committee, succeeds Mr. Rumbley as chairman of that Committee.

TEXAS MEXICAN.—A.R. Ramos elected president, general manager and chairman of the board, Laredo, Tex. **C.H. Darnell, Jr.,** vice president-operations, appointed executive vice president.

TOLEDO, PEORIA & WESTERN.—Ralph D. Mathes appointed superintendent.

Douglas G. DeBerg named engineer-maintenance of way.

UNION.—William S. Miller, general manager, retired July 31.

UNION PACIFIC FRUIT EXPRESS.—A. Edward Chiasson, general manager, elected vice president and general manager.

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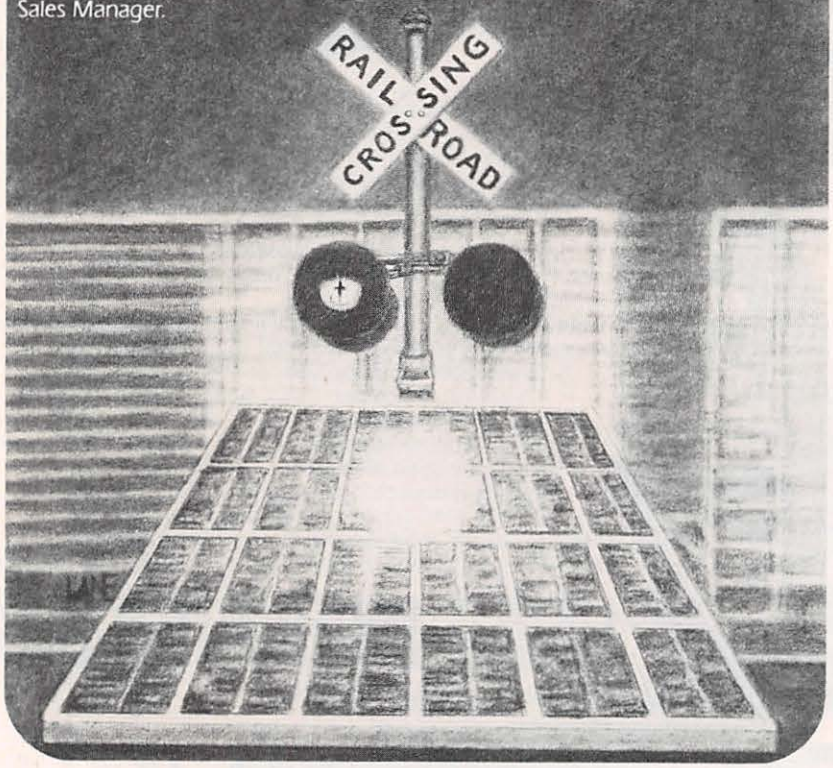

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John W. Rudibaugh has been appointed executive vice president, **Railroad Dynamics, Inc.,** Ardmore, Pa. Succeeding Mr. Rudibaugh as vice president-marketing, is **Neil G. Perry,** formerly of **Buckeye Steel Castings Co. Ross G. Carle,** formerly of **Keystone Railway Equipment Co.,** has been appointed vice president-engineering, Railroad Dynamics, succeeding **V.T. Hawthorne,** who is now a consultant to R.D.I.

John R. Codner, manager of sales, **Keystone Railway Equipment Co.,** Camp Hill, Pa., has been appointed vice president-sales.

Walter W. Weeden, Jr., has joined **Servo Corp. of America,** Hicksville, N.Y., as director of marketing, Transportation Division. Mr. Weeden was formerly with **General Electric Co.,** Railroad & Transit Division, for 24 years, most recently as western regional sales manager at Chicago and Erie, Pa.

Richard L. Ray, who had been with Servo from 1965 to 1976 in various technical/marketing positions, has returned to the Marketing Department as manager of railroad programs, Transportation Division.

Ron Koch and **Ronald P. Zimmer** have been named district sales managers, Transportation Division.

Ed Niemaseck has joined **J.P. Devine Mfg. Co.,** Pittsburgh, Pa., as eastern regional manager at North Arlington, N.J.

R.E. Kirby has been named resident sales manager, **L&M Radiator, Inc.,** 4925 East Alta Vista, Tucson, Ariz.—Phone: (602) 622-8622.

Herbert S. Koenig, Jr., has been appointed eastern district service manager, **Ellcon-National,** Totowa, N.J. **Jack W. Kelty** has been named western district service manager and **Donald C. Stansfield** becomes western district sales manager.

William D. Mundinger, manager of production engineering, **Youngstown Steel Door Co.,** Youngstown, Ohio, has been named director of engineering, research and product planning, succeeding the late **Herman Aquino. William G. Sears,** director-new product development, **MacLean Fogg Co.,** has joined the sales staff of Youngstown Steel Door as a regional sales manager at Chicago.

Richard G. Brown, vice president-sales services, **Union Tank Car Co.,** Chicago, has been elected executive vice president, **Trinity Industries Leasing Co.,** subsidiary of **Trinity Industries, Inc.,** Dallas Tex. The new unit will

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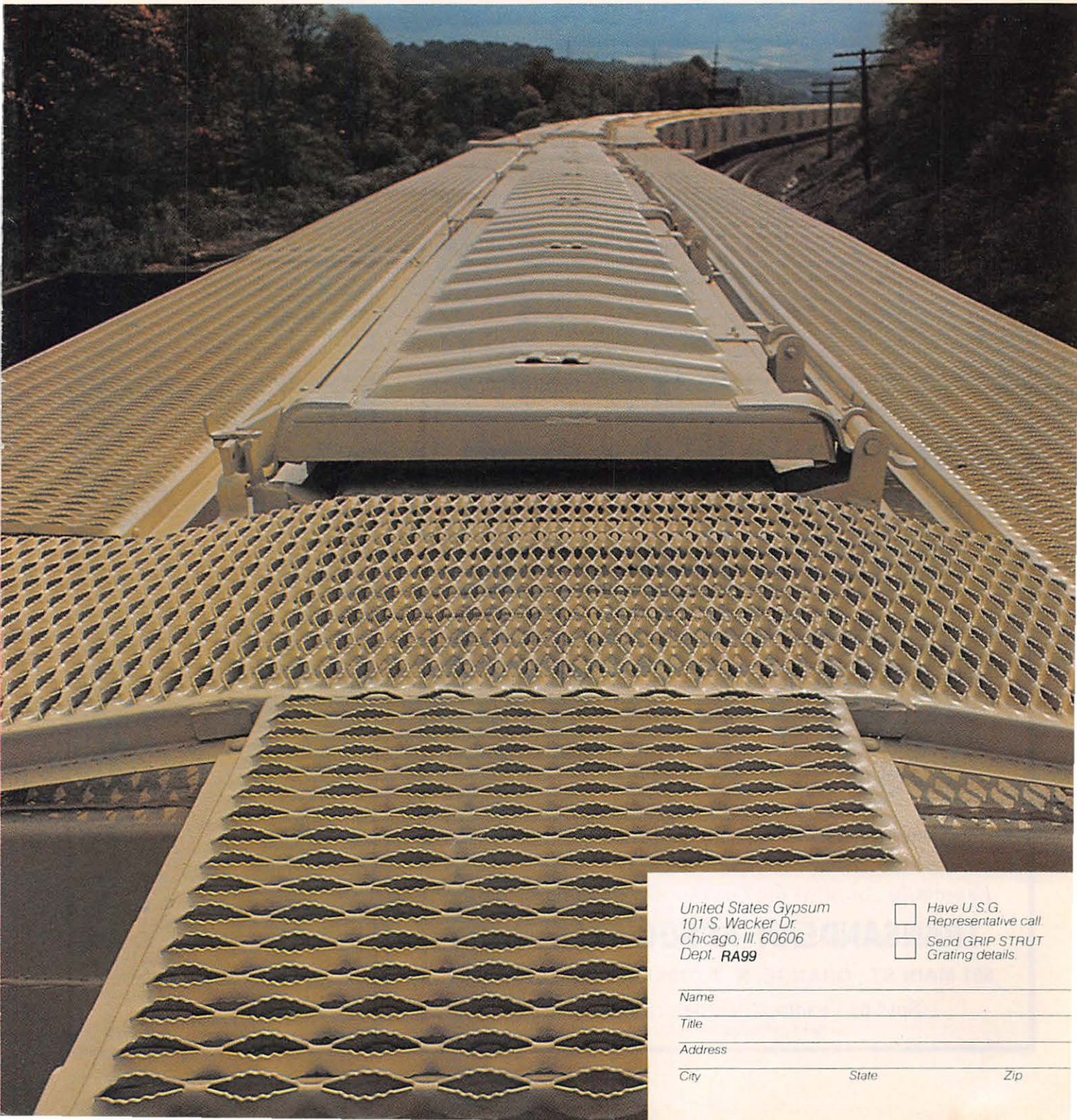

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market, for sale and for lease, rail freight cars, which includes tank cars of all specifications along with open top and covered hopper cars.

Robert I. Monson has been appointed manager, Advertising and Sales Promotion Department, **Vapor Corp,** Chicago. **George Martucci** will assist Mr. Monson and be in charge of Publications and Training. Mr. Monson has been with Vapor for more than 20 years and Mr. Martucci, over 25 years.

Calvin E. Smith, manager of unit train parts sales, **Abex Corp.,** has also been named central regional sales manager, Railroad Products Group, with headquarters as before at Chicago.

Gary C. Howard, service engineer in the southeast, **FreightMaster,** has been appointed sales engineer, with headquarters as before at Hueytown, Ala. He will represent both cushioning equipment and Quick-Car repair services. **C.L. Bostic** has been named assistant plant manager, Quick-Car repair service facility, Saginaw (Ft. Worth), Tex.

Mike Tankersley has joined the **Touchstone Railway Supply & Manufacturing Co.'s** Marketing Department as sales representative, Jacksonville, Tenn. He has had two years experience working in Touchstone's radiator manufacturing plant between quarters, while attending the University of Tennessee.

Denevoi Heishman has been appointed sales representative, **Lithcote Co.,** Chicago. He will be responsible for sale of Lithcote services including railcar repair and testing, and the application of linings and coatings.

The Virginia offices of **Parsons Brinckerhoff** and its railroad consultant subsidiary, **PB CENTEC,** have been relocated to Enterprise Center, 8301 Greensboro Drive, McLean, Va.

Garry J. Fadale, vice president of sales, **Motor Coils Manufacturing Co.,** Braddock, Pa., has been named vice president of operations, **Thomas J. Reinecke,** sales manager, assumes the top sales responsibility. **Charles P. Boyle** has been named southeastern sales representative. **Gadi Na'aman** has been appointed general manager of production planning and control, a newly created function.

James M. Meyers has been promoted to vice president, administration for **Miner Enterprises, Inc.** and three of its subsidiaries. He was previously assistant vice president, administration.

Dennis Daniels has been named western region manger, **Railcar Division,** Transportation Systems & Industrial Group, **Evans Products Co.,** Rolling Meadows, Ill. He was formerly western region account manager.

Jackson Vibrators, Inc. has moved into new offices at 1699 East Woodfield Road, P.O. Box 95036, Schaumburg, Ill. 60195. Phone: (312) 843-3995.

Transit

Charles Kalkhof, assistant general superintendent, maintenance of way, **New York City Transit Authority,** has been appointed general superintendent, Rapid Transit Division, and will be in charge of operating the city's subway system. **George J. Ziegler,** acting chief engineer since the death of **John T. O'Neill** last year, has been formally named chief engineer.

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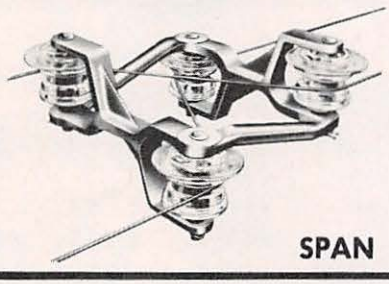

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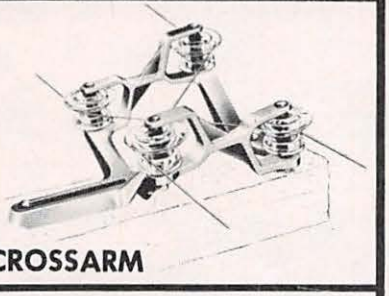

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This 6-color calendar measures 28½ x 28½ inches; a photo of Mr. Teller and a brief history of his career as a commercial artist are included. Price is $7.95 plus $1.50 postage & handling to U.S., Canada, & Mexico (foreign orders enclose $2.50). PA residents add 6% State Sales Tax.

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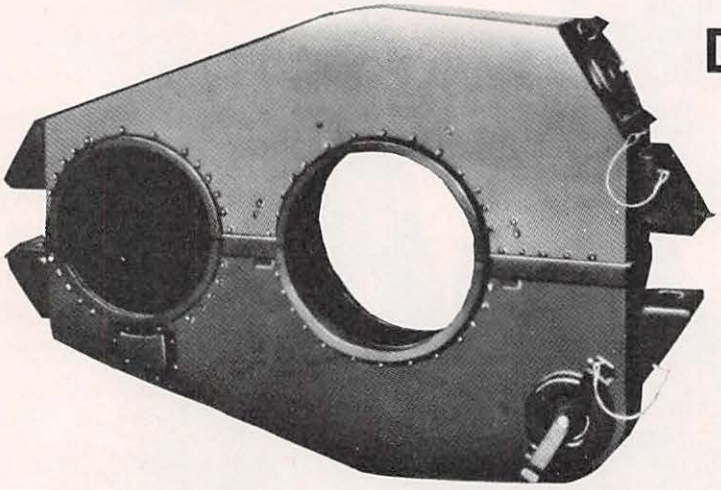

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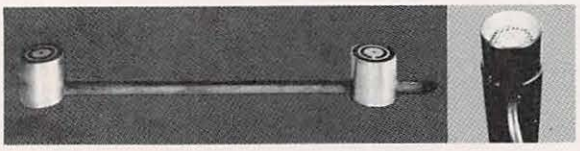

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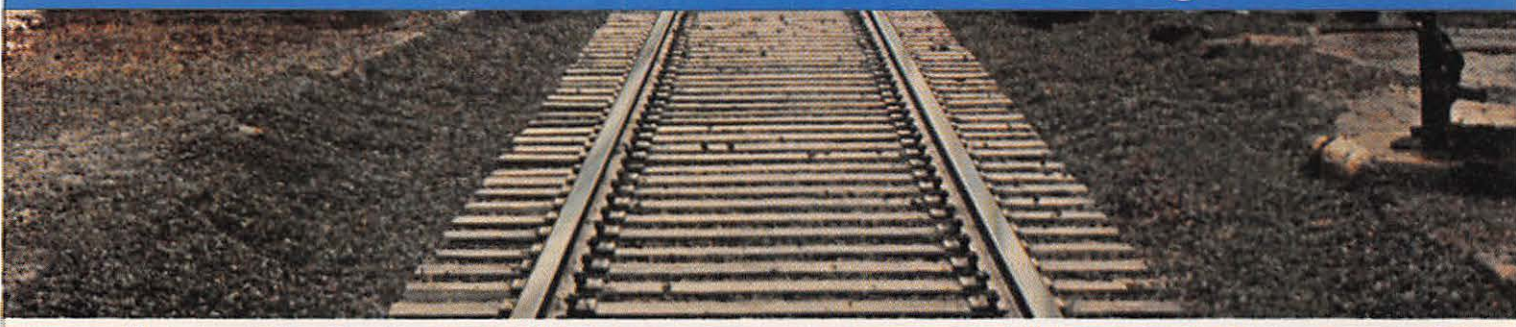

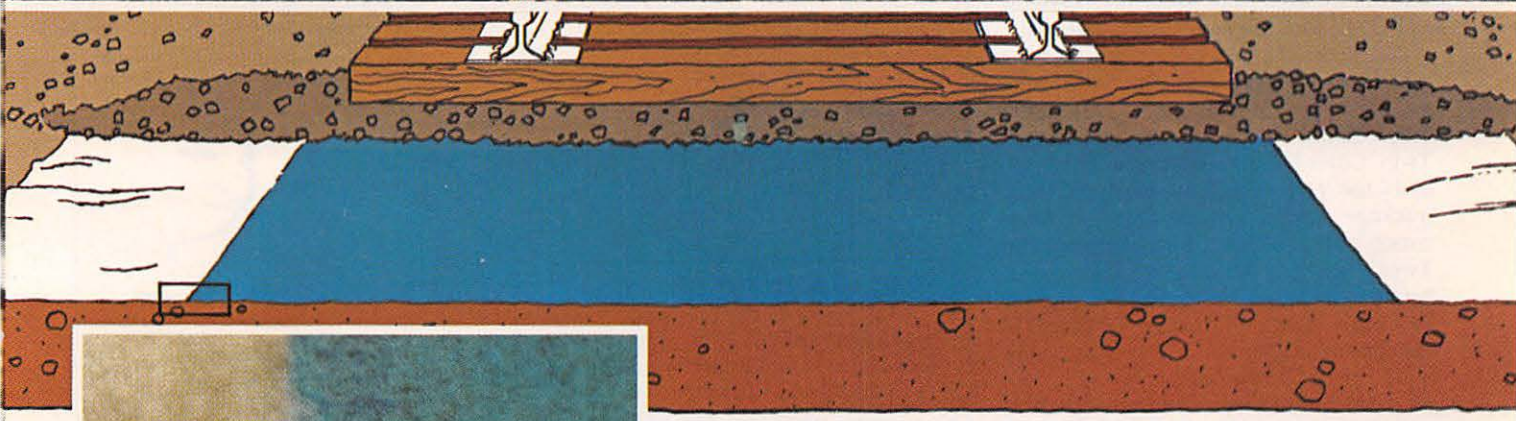

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Trapezoid Tear, lbs	50	100	ASTM D-2263
Mullen Burst, lbs	175	+300	Mullen Test
Thickness, mils	100	125	ASTM D-1777
Width, inches	30-30	90	
Abrasion Resistance, lbs	50	75	Tabor Test ASTM D-1175
Puncture Resistance, lbs	50	140	ASTM D-751
EOS	70	140	C of E test
Air Permeability, cfm	250	150	ASTM D-737

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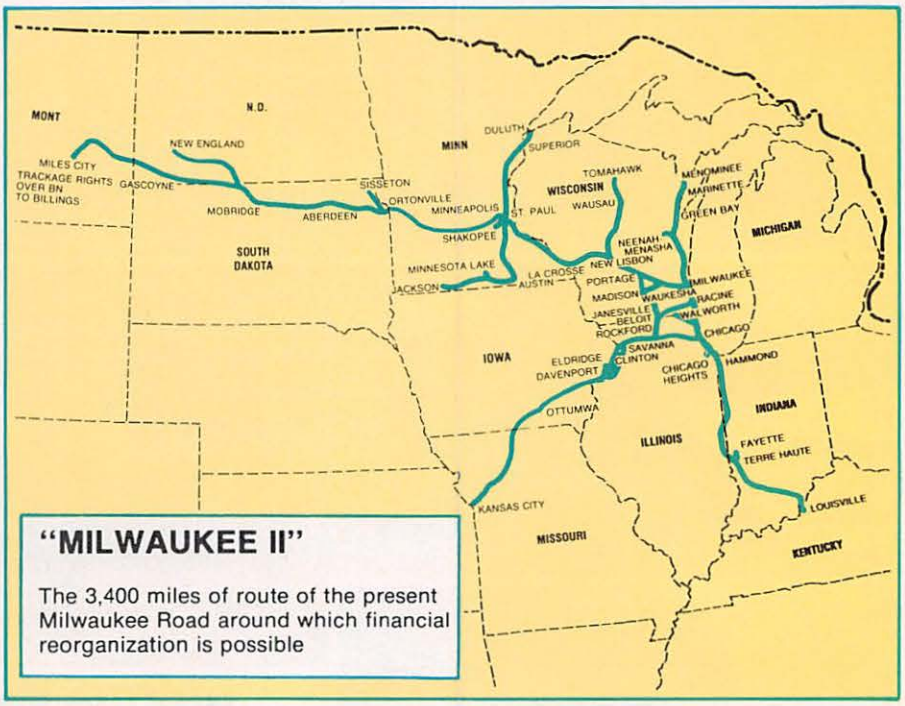
Milwaukee: Rescue by surgery?

For bankrupt Milwaukee Road, tough times could well become desperate ones—but, under court direction to do so, Milwaukee has at least set forth a preliminary plan as to how parts of the railroad could be rescued. It's a plan that will probably draw opposition from a number of the interests involved—but it's also a plan that the Milwaukee trustee regards as workable, given the cooperation of all who will have to be concerned.

As expected, the plan contemplates a scaling down of the present 9,800-mile system to a "Milwaukee II" of 3,400 miles. The basic core would be Chicago-Twin Cities-Duluth, Chicago-Louisville, and Chicago-Kansas City, plus additional trackage serving various points in Wisconsin and Michigan. Lines between the Twin Cities and Miles City, Mont., and between the Twin Cities and Austin and Jackson, Minn., would be included if enough financial assistance were provided by affected states or other entities.



● **The "timetable."** Milwaukee filed the preliminary plan with both the reorganization court in Chicago and with the Interstate Commerce Commission. Under the Bankruptcy Act, the ICC is to hold public hearings on the plan's feasibility. If the commission gives its approval, with or without modifications, and if the court accepts the ICC's decision, then the plan goes to a vote of the various classes of creditors and claimants. If they approve it, then it may finally be ratified by the court and implemented.

(Meanwhile, Milwaukee has also been moving on two other fronts. First, it has proposed abandonment of about 2,500 miles of line, but the ICC probably won't complete its investigation of the petition before mid-January. Second, Milwaukee has filed a second embargo request with the reorganization court, this one covering the 6,400 miles which do not fit into the proposed Milwaukee II. The court turned down an earlier bid for an embargo, questioning its authority to grant such a request and suggesting that some time should be given in which Congress and/or the commission could take some action. Thus far, however, neither Congress nor the ICC has moved, and after a hearing in which Milwaukee indicated that the alternatives are cut back or collapse, Judge Thomas McMillen was expected to rule on the proposal by about mid-September.)

In filing the reorganization plan, the trustee—a singular designation that covers both departing Trustee Stanley E.G. Hillman and incoming Trustee Richard B. Ogilvie—warned that both the timing of the reorganization process and the way in which Milwaukee assets may be used are subject to change. Caution, the trustee added, should also be used "in approaching the numbers contained in this plan. In addition to the usual problems of projecting economic performance, there is the problem here that the performance is being projected for a system that does not yet exist. Milwaukee II will have a different structure, markets, competition, and concentrations of equipment than the present Milwaukee."

● **Eventually, positive NROI.** In any event, the preliminary plan looks to a five-year reorganization process, during which there would be a steady decline in net railway operating income deficits—from $104.5 million in the first year to $2.8 million in the fourth year, with the fifth year projected at a positive NROI of $18.6 million: "The dramatic turnaround in 1984 reflects the cumulative impact on five years of traffic growth due to improved track, equipment, and service and the sharply reduced need for rehabilitation since the track and equipment are approaching a state of normalized maintenance at that time."

Although NROI can't be equated with bottom line net, since it's stated before consideration of debt service costs, the projections contrast sharply with what Milwaukee has actually been experiencing and with what it forecasts if it should be required to continue operating the full system. For the first six months of 1979, Milwaukee lost $64 million (after a loss of $82 million in 1978), and the full-year 1979 deficit is now projected at about $138 million.

In its effort to determine what part of the present system might be expected to become economically self-supporting within a reasonable number of years, the trustee early last year retained Booz, Allen & Hamilton to make various analyses. Booz, Allen looked at close to 50 possible variations on a route structure and did detailed analysis of eight possible configurations.

After consideration of a number of factors dealing with economics, competition, and marketing potential, a mini-Milwaukee of about 1,700 route miles "initially appeared to offer the maximum possibility of viability with the minimum risk." But, the trustee said, "the public interest in maintaining a railroad from the Twin Cities to Miles City, Mont., and the potential importance of the Kansas City gateway to the Milwaukee led to the inclusion of additional lines."

Economic factors weighed heavily on the final determination—such factors as the size of plant investments required, the potential sources of capital for rehabilitation, the size of investments required for equipment, and the likelihood of being able to get the needed capital.

● **Economics, plus.** But equally important, apparently, were factors related to competition and to getting results in a hurry, and the trustee was frank in discussing these points:

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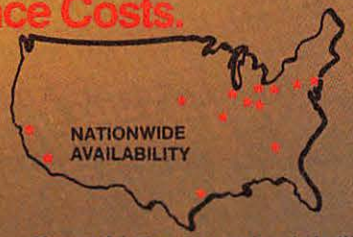

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"Booz, Allen's projections assume that the Milwaukee will be able to improve its share of the market served by railroads. A realistic assessment of the Milwaukee's ability to compete in various segments is, therefore, important. Booz, Allen's survey of Milwaukee customers shows that service reliability and equipment supply are the most important factors in choice between rail carriers. The Union Pacific and Burlington Northern are beyond a doubt the dominant carriers in the Pacific Northwest area. The Milwaukee's current transcontinental transit time is almost triple their schedules. The Milwaukee will have to invest all or nearly all of the long-term capital required for the larger configurations before it could hope to achieve competitive schedules.

"There are four railroads other than the Milwaukee in the Chicago-Omaha corridor. Presently, at least two of these carriers are superior in performance to the Milwaukee. All are competing for the Union Pacific's flow of traffic to and from the West. The Milwaukee has been one of the least effective participants in this competition. A substantial investment would be required to improve its market share only slightly. . . .

"The Milwaukee's primary main-line operation from Chicago to Minneapolis is highly competitive with other railroads because it is the shortest route with the least curvature. The experimental 'Sprint Train' service initiated in June 1978 has demonstrated unequivocally that service concentration in this traffic area of high density can produce a dramatic increase: TOFC volume more than doubled in the first nine months of 'Sprint Train' operation. This combination of management and asset concentration, coupled with an energy-efficient railroad operation and track improvements funded by 4R capital, is positive proof that new business opportunities can be realized in a short time span in this area.

"The Duluth gateway is a primary focal point for Canadian business. The Milwaukee's participation has not been significant in the past because it has been viewed as a transcontinental competitor by the Canadian carriers. The Milwaukee presently can provide competitive service to the Midwest and beyond to the Southeast through Louisville and to the Southwest through Chicago. Therefore, there is potential for increased participation in Canadian business on the Milwaukee's midwestern lines."

● **Making a showing, quickly.** As for that matter of getting results, the trustee has this to say:

"It is extremely important that a configuration quickly produce improved financial results. It is also mandatory that the time span between short and long run be condensed to the smallest interval possible. It is not possible for the Milwaukee to finance large operating deficits while huge investments are being made in the hope of obtaining financial improvements many years hence. In this inflationary period, larger configurations with high investment and modest net railway operating income produce further financial risks.

"A configuration that can 'start up' immediately has a higher degree of success probability than another configuration which requires capital lead time. A greater concentration of resources—plant, equipment, and management—will have more near-term financial benefit than would the dissipation of resources over a larger and more complex system."

Milwaukee II would, of course, require substantial expenditures for rehabilitation—but nothing approaching what would be required for a rehab of Milwaukee I, the present deteriorating system.

In terms of equipment, Milwaukee II needs are pegged at about 23,000 freight cars by the end of a five-year period, with all but 3,700 cars drawn from the existing fleet.

Rehabilitation costs are estimated at $36 million (in 1977 dollars), and the trustee sees financing as possible through a combination of 4R Act loans, state and shipper programs, and internally generated funding.

Rehabilitation costs for locomotives would run a bit higher, $38 million for the 355 units required, but no new units would be needed.

● **Getting support.** Regardless of how practicable the operating and marketing plans for a Milwaukee II may be, however, putting Milwaukee II on the track will require a host of approvals, and among those most directly concerned are Milwaukee's creditors and its employees.

The trustee told the court that a preliminary classification of claimants has been made—one that runs from Class A all the way to Class N (common shareholders; the "trustee anticipates that the common stock will have no value"). Class N, as well as Class M (preferred shareholders), consist mostly of Chicago Milwaukee Corp., which holds almost all of both the common and the preferred.

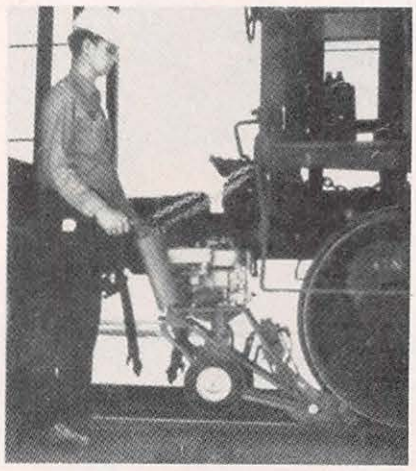
Labor protection may be another tough nut.

Assuming that Milwaukee II would have a work force of 5,800 employees—and making a series of other assumptions as to how claims might break down—the trustee's current estimate is that labor protection claims (mainly for displaced and dismissed employees) would run about $325 million, and "a requirement that this level of claims be paid immediately or at any time in cash would prevent reorganization of any portion of the Milwaukee and result in further job losses."

A certain amount of agonizing is involved here, with respect to all claimants, employees included, and in part because of the length of time that could pass before any claimants get anything.

In the preliminary plan, the trustee put it this way: "In order to provide maximum equity to all parties and to facilitate the reorganization of Milwaukee II an alternative arrangement should be developed which would allow employees to receive prompt and certain payment of a smaller amount of money than would otherwise be the case. Such an arrangement would better meet the real needs of employees for protection at the time of the loss of jobs, while providing an increased return to other creditors and shareholders. Accordingly, the trustee proposes that the Reorganization Court authorize him to establish a labor protection settlement program with a fund of $50 million."

This proposal "is preliminary in nature. The trustee expects to conduct further negotiations with the representatives of the employees with respect to the details of such a settlement program and at an appropriate time will seek the authority of the court to commence such a program." ■



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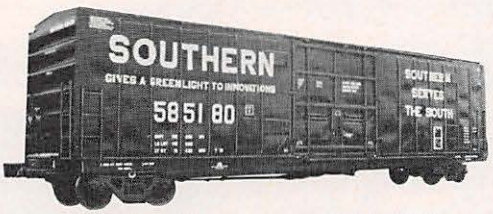

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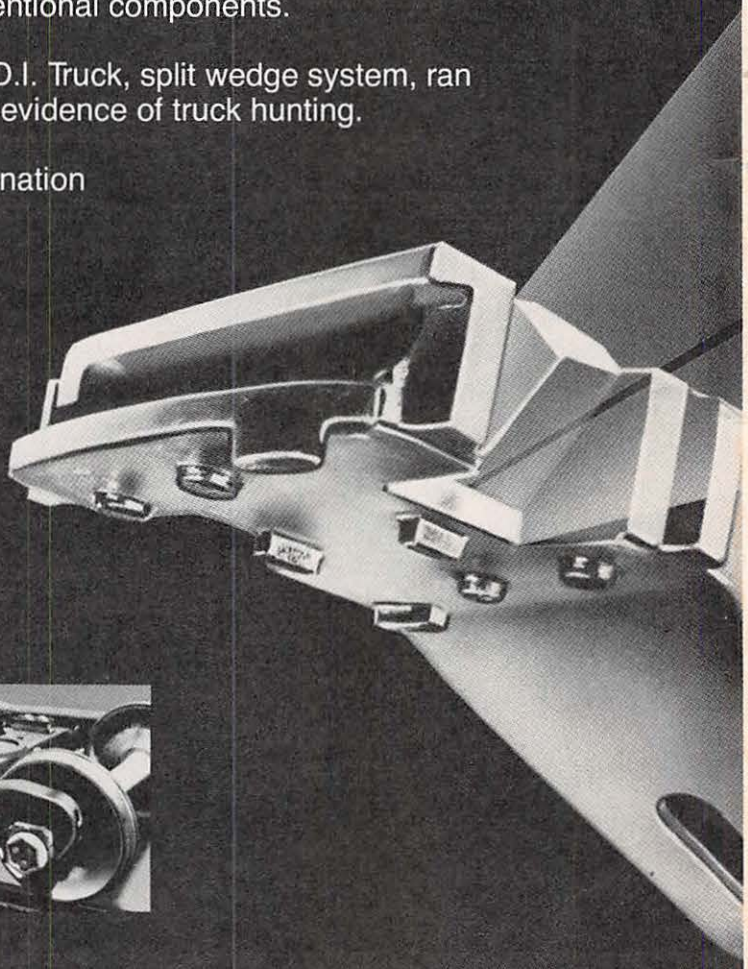

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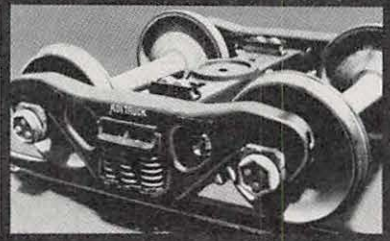

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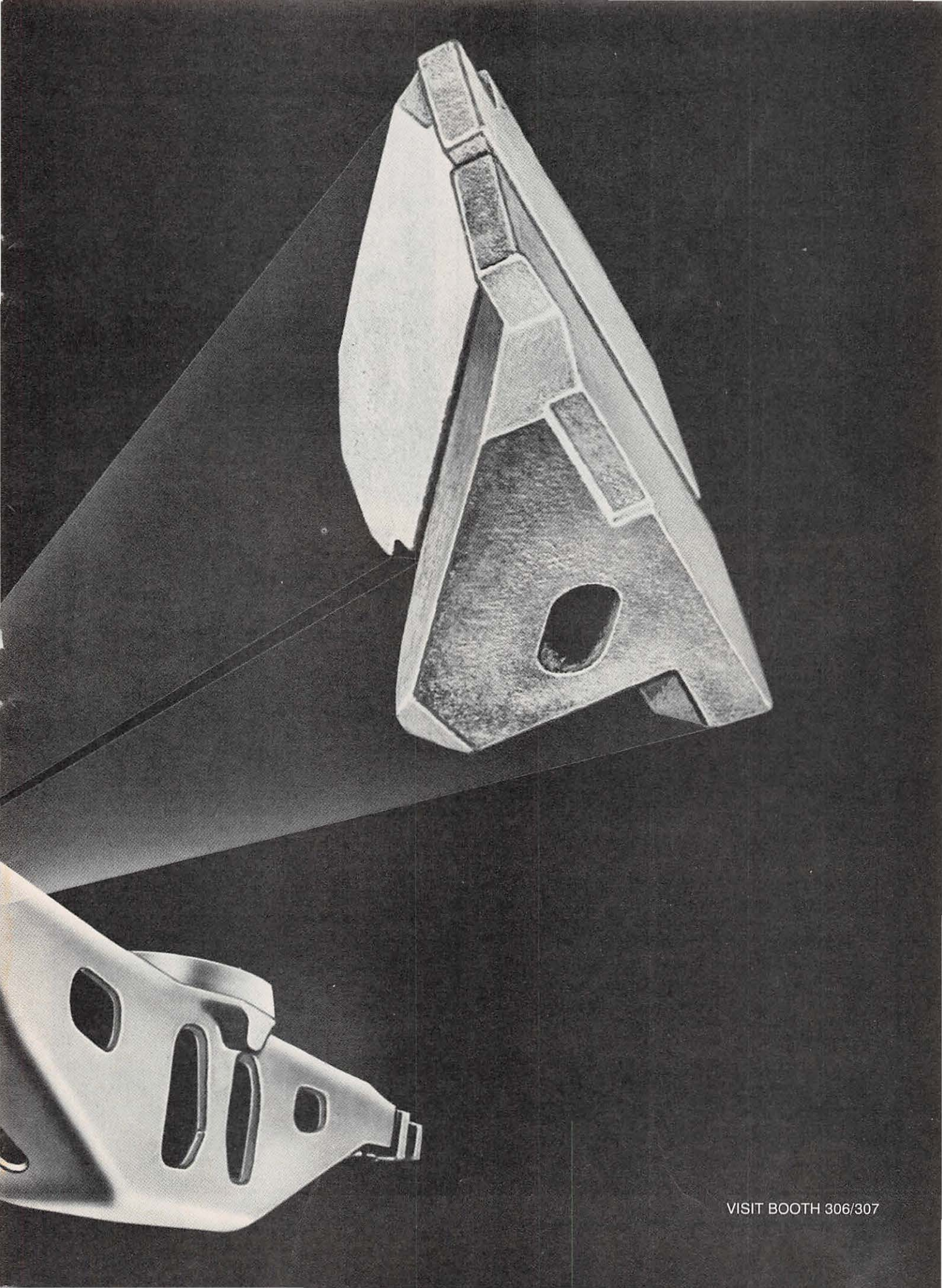
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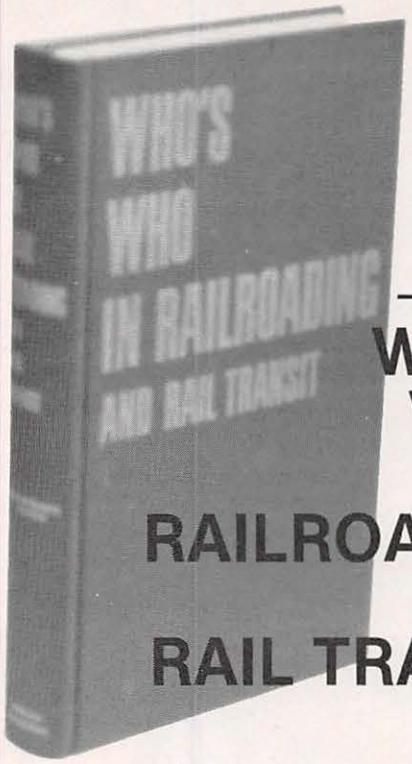

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Transit marketing

(Continued from page 86)

nickeled and dimed. It should be done with adequate resources, and then it should be required reading for the people who make the critical judgments. It does no good sitting on a shelf. Obviously it should be done with scientifically sound methodology.

Recently there was quite a stir in the Washington press about our rail farecard-vending machines. Indeed, one of the great newspapers of America editorialized rather strongly about that. One would gather from the editorial that we should throw all those machines out, because the public just couldn't stand them. Well, it happened that during the June crisis—when we had more people than we anticipated because of the energy situation—we polled our patrons at 28 of our most heavily used rail entrances to find out their attitudes toward those machines. It turned out that 61.7% of those people thought the machines were a great way to collect fares.

However, as we looked a little bit further, we found that many were frustrated by the exit gates, because once they had performed one transaction and had completed their journey by rail, they wanted out of that system—they didn't want to stand in line again to get out. Another problem was waiting at the escalator to get out. Now, we make no judgments as to whether that's a design deficiency or a technical deficiency, because we're not technocrats. But we do think that it's important, rather than acting impulsively on what you might have read in a newspaper or what might have been said at a board meeting, that you really find out what the customers think.

The fare collection question is currently under consideration by our general manager and the board, and I hope that fact that 62% of the people—six out of 10—like it will not be lost on them. I hope the fact that over half of the people don't like queuing up at exit gates will not be lost on them, either.

So if I had more money I would probably put it into market research. The next thing I would put it into would be personnel to man our consumer representative or ombudsman function, because I consider that to be a very important activity—somebody speaking for the consumer inside the house and, hopefully, effecting positive change.

RA: As a system matures, and you reach the point where you have as many riders as you can comfortably handle, does the role of marketing diminish?

WARRINGTON: I worry about the state of mind that says that when your ridership is up you don't need marketing, because that would tend to suggest that the only reason you have marketing in the first place is to bring customers into your system. It think that marketing has a much more important role to play than that. First of all urban markets are highly mobile, and replacement riders need to be attracted. This is especially true in Washington. Winning new customers is an extremely important role, but once you get the people into the system you need marketing not only to keep them there but to keep them there because they *want* to be there.

There's a dreadful expression that we use in our business called the "captive rider." I think when we get to the mental state where we think we have riders captive, then we should be replaced, because those riders need to have the kind of attention that they have a right to expect, not only for their fare dollar but for their tax dollar. The problem is not just to keep them, but to keep them happy. They have a right to get first class treatment from us, and that's part of the responsibility of marketing. Mass transit should not be considered merely as transit for the masses. It is a service for a whole lot of individuals. Maintaining that approach is a continuing obligation of the professionals in marketing. The "captive rider" syndrome probably did more than anything else to put private operators out of business during the last decade or so. ■

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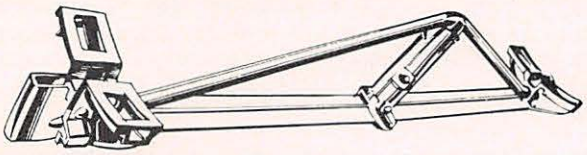

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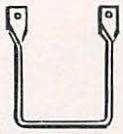

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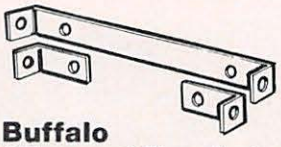

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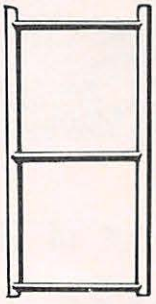

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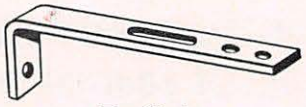

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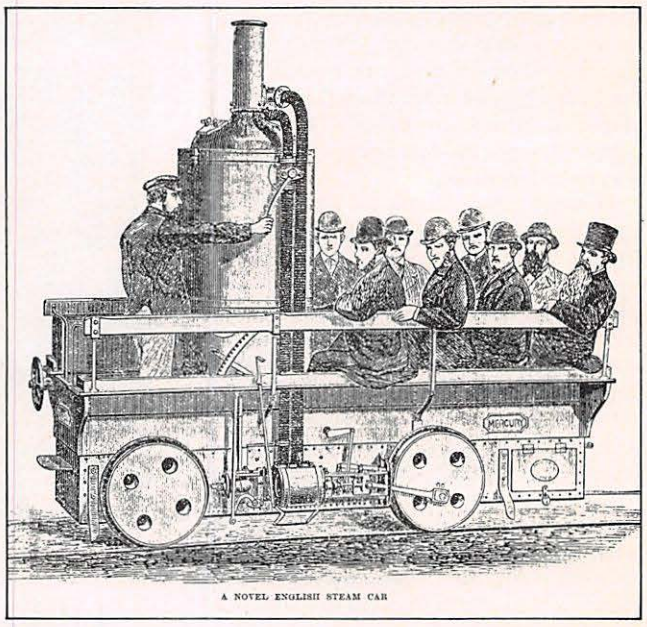
100 YEARS AGO IN

(September 4 and 11, 1879)

We give herewith an engraving of a novel steam car, designed and built by Ransomes & Rapier for one of the English colonies. It is a combination of engine, tender, brake and car, all in one, and is said to be the least expensive engine yet made for traveling twenty miles an hour. The boiler is of the vertical type, with ample grate and heating surface. The engine has two cylinders and is provided with reversing gear and all the other fittings usual in the best locomotive work. The car is mounted



A NOVEL ENGLISH STEAM CAR

on springs, and can be made either open, as shown in the engraving, or closed with roof and glass windows.

With four wheels coupled the engine will draw a load of fifty tons on a level at eight miles an hour.

The machine represented in the engraving will carry eight passengers at a speed of twenty miles an hour. It can also draw two supplementary cars, each containing sixteen passengers, at a speed of fifteen miles an hour.

* * *

The directors of the Chicago, Burlington & Quincy road have taken a commendable course in resolving to dispense with Sunday work as far as possible. The Michigan Central, through general manager Ledyard, has also issued orders to similar purport, and it is to be hoped that a great reform in this respect has been inaugurated. It is a question whether it is absolutely necessary to run freight trains on Sunday at all.

* * *

Mr. Jay Gould's verdict, after a hasty inspection, according to a newspaper report, is that the English railways are "well built but poorly equipped, and wretchedly inconvenient." This is putting it pretty strong, but anyone who has passed a hot day or night in the middle seat of a compartment car, wedged in between disagreeable strangers, with his legs interlaced with those of his *vis a vis,* every breath of air apparently cut off from him, his limbs cramped from the confinement of the locked vehicle, unable to cool his tongue with a drop of water, or in case of sickness, to obtain the urgent relief sometimes demanded, will, if he has ever enjoyed the roominess and luxuries of American drawing room and sleeping cars, feel that it is not far from the

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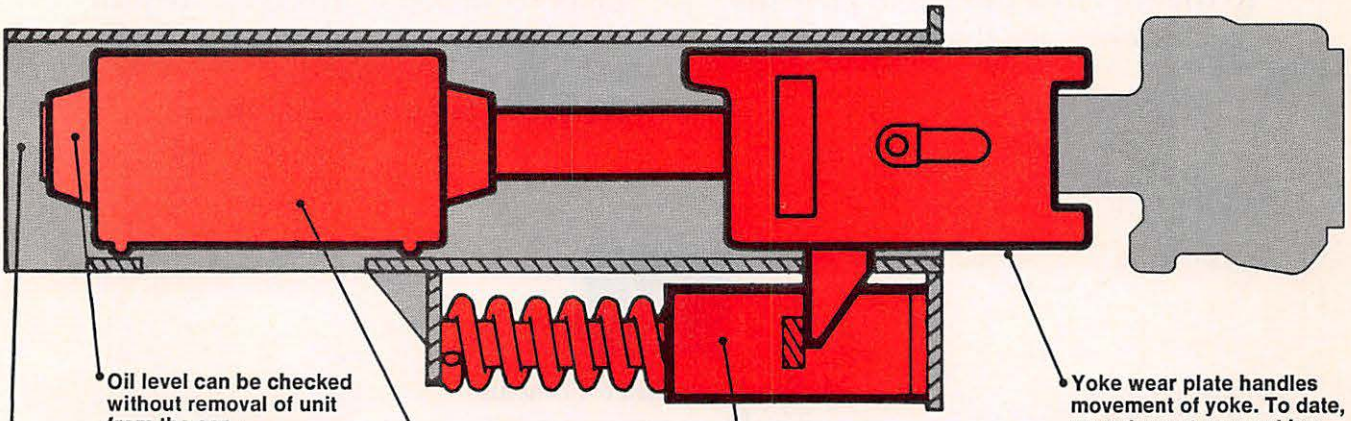

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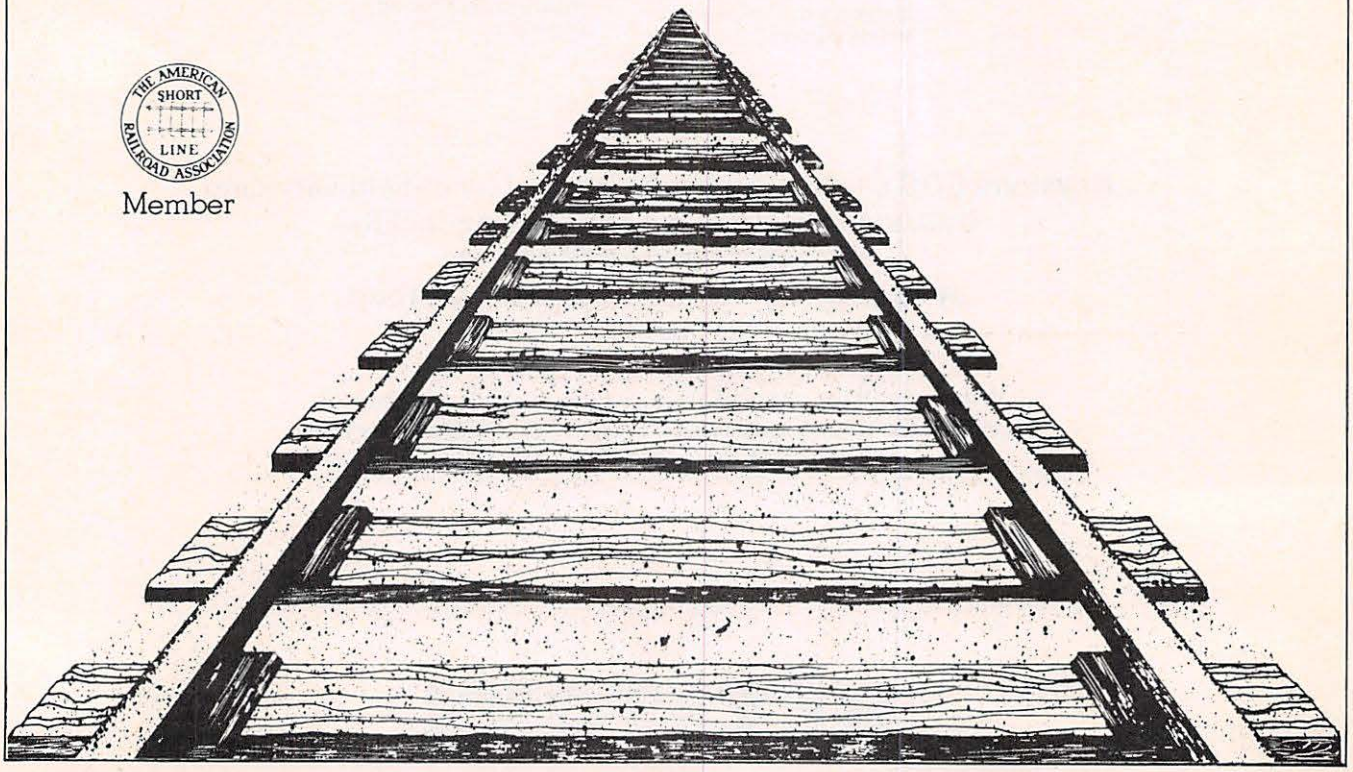

truth. The wonder grows that, with all the lavish expenditures of British railway companies upon road bed, machinery and stations, they still cling to the primitive stage coach as their model for a railway car. It is the more unaccountable, since the solidity of their road ways and the absence of sharp curves and heavy grades makes it the more natural that their cars should excell in size, strength and comfort. With all respect for the wonderful British energy and ability, it looks as if the only reason for this state of things was a stubborn determination to adhere to a system or practice simply because it is old.

* * *

A costly and striking monument in memory of George S. Bangs, for many years superintendent of the railway mail service of the United States and the first president of The Railway Age Publishing Company, was unveiled at the exposition building in this city on last Saturday evening. An address was made by the Hon. Emery E. Storrs. The design of the monument is rustic. The artist has hewn out of stone the trunk of a tree that rises with an appearance of strength and age fully eighteen feet. At the top are the evidences of a sudden interruption of growth and life. The remaining branches twisted and gnarled and the severed trunk very fittingly figures the untimely disaster which carried the man off in the prime of life. At the foot of the tree is a mail car partly in and partly without a tunnel with a brakeman on the platform in the act of setting a brake. The workmanship is artistic in every particular.

On one side of the monument is cut the following inscription:

GEORGE S. BANGS
Died November 17, 1877
Aged 54 years, 8 months, 27 days
His crowning work the
Fast Mail

The monument will be erected at the grave of the deceased at Rose Hill Cemetery, Chicago, at the close of the exposition. Its cost was $5,000, the money being contributed by the members of the railway mail service, with whom the name of their late chief is an honored and pleasant memory.

* * *

The silver engine America, of the Chicago, Rock Island & Pacific road, that took the first premium at world's fair, Paris, in 1870, has been undergoing repairs, and will hereafter run between Des Moines and Council Bluffs.

* * *

The freight handlers on the Lake Shore & Michigan Southern road, who struck last week for an advance of wages to $1.25 per day, were offered $1.15 as a compromise, which most of them accepted.

* * *

A recent favorable judicial decision will cause the Brooklyn, (N.Y.) Elevated railway company to resume work speedily. The material for the road has been contracted for, and part of it has already been delivered. Sixty blocks of stone for the foundations, weight nearly five tons each, have arrived, and some iron work and cement are stored in Reid avenue. The route of this company is from Fulton ferry through Water street, Hudson avenue, Park avenue, Grand avenue, Lexington avenue, Reid avenue, Marion street, and Broadway to East New York. The structure will resemble that of the elevated road in Third avenue. Under its charter the company has the right to run through other streets than those named, provided it obtains the consent of the mayor.

* * *

Missouri is not entitled to the distinction of being the only state where train wrecking is practiced. Within a few days attempts at this business have been reported on the Cleveland, Columbus, Cincinnati & Indianapolis road in Ohio—three successive attempts at the same place—on the Lake Shore & Michigan Southern in New York, and on the Baltimore & Ohio in Ohio, the latter attempt resulting in ditching the train and killing the engineer, fireman and another man. The shooting or hanging of every fiend who places obstructions on a railway track would have a wholesome effect.

* * *

The Great Western railway, England, has recently put on a new fast train between London and Plymouth which makes the entire journey of 246 miles in six hours, making the average rate of speed, stoppages deducted, about 43 miles per hour.

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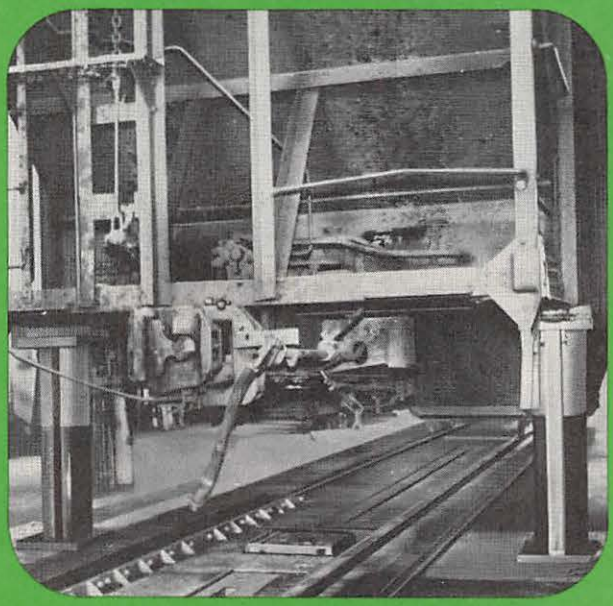

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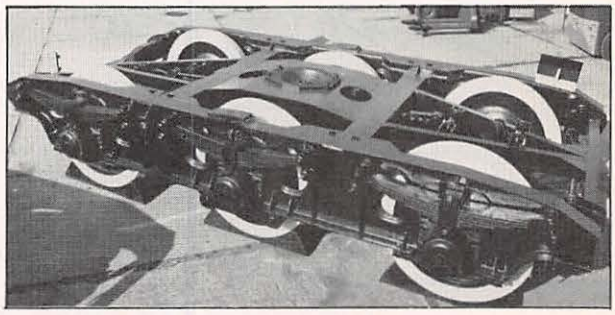

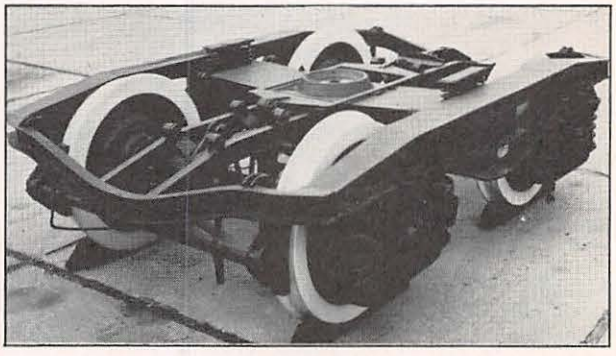

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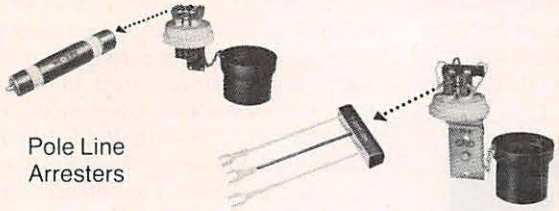
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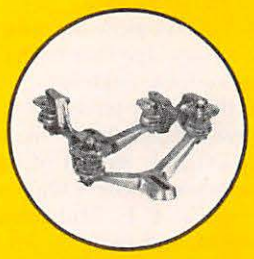
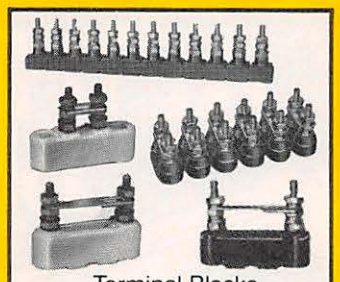
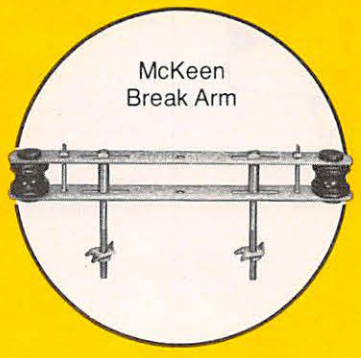

Aluminum Transposition Brackets

Lo-Pass Bridging Filter


Terminal Blocks

Lock, Keys

Aluminum Cable Boxes



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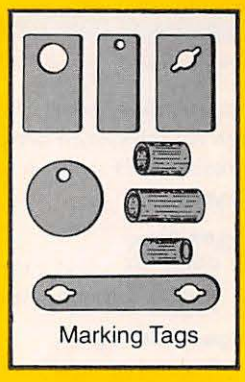
Marking Tags

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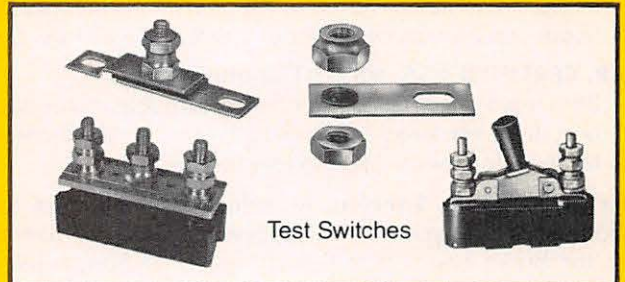
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Letters

Shuttle diplomacy?

East Windsor, N.J.

To the Editor:

I read with special interest your article entitled, "Eastern passengers land on Amtrak" (*RA*, July 30, p. 3). I was working in the Amtrak Station Services Office in Penn Station, New York, on the night of the event you described, and had to handle the many Eastern shuttle passengers who became irate after I explained that the 10 p.m. train only went as far south as Philadelphia.

In attempting to "turn off the water and prevent flood conditions" within the station, I called Eastern and learned that they had consulted an old Amtrak ad before putting train information on their announcement board at LaGuardia.

The Amtrak operations people agreed to run #193 to Washington. In an effort to plan ahead, I called Eastern a third time to suggest a more organized effort for helping them with their southbound passengers; the 12:01 a.m. train could also be continued past Philadelphia.

But Eastern, which had not called Amtrak prior to sending the initial group of grounded flyers, provided no cooperation at all, merely stating that anyone who still wanted to go south was being directed to Penn Station or to the Port Authority Bus Station. My request for a head count was brushed aside.

Perhaps such treatment will promote some to leave the "wings of man" and join the clickety-clack people.

John J. Kilbride, Jr.

Grade crossing closure

Manhattan, Kan.

To the Editor:

This letter is in response to your excellent article, "Grade crossings: The closure option" (*RA*, May 14, p. 41), and the letter by C.L. Amos of the AAR commenting on this article and encouraging a stronger effort to promote closure as a viable safety improvement option (*RA*, July 9, p. 43), Mr. Amos mentioned a research project, jointly funded by FRA, ATSF, and Amtrak to develop guidelines for crossing closure. I am project director of this project and would like to make a comment or two and a request.

I'm sure that it comes as no surprise to any reader of *Railway Age* that trying to get a grip on any rational guidelines is extremely elusive, because it tends to be an irrational subject, particularly in the minds of public officials fearful of irate constituents. However, I believe that continued efforts such as C.F. Mulrenan's, as well as the vision and faith shown by FRA, ATSF, and Amtrak in financing a project such as ours, will eventually pay off in reduced opposition to (or at least rational consideration of) the "closure" option. . . .

As part of the research project, we are compiling case studies where trade-offs have been mutually beneficial to the railroad, the community, and, most importantly, the safety of the motorist. I would appreciate suggestions from your readers.

Eugene R. Russell
Associate Professor
Department of Civil Engineering
Kansas State University

Rail-bus transfers

New York

To the Editor:

I don't want to steal any of MARTA's thunder, but its Avondale station is not the first in the United States to boast barrier-free transfers between rail and bus (*RA*, July 9, p. 26). The Rockaway Parkway station of New York's 14th Street-Canarsie Line has had this feature for over a decade.

Robert D. Sheehan

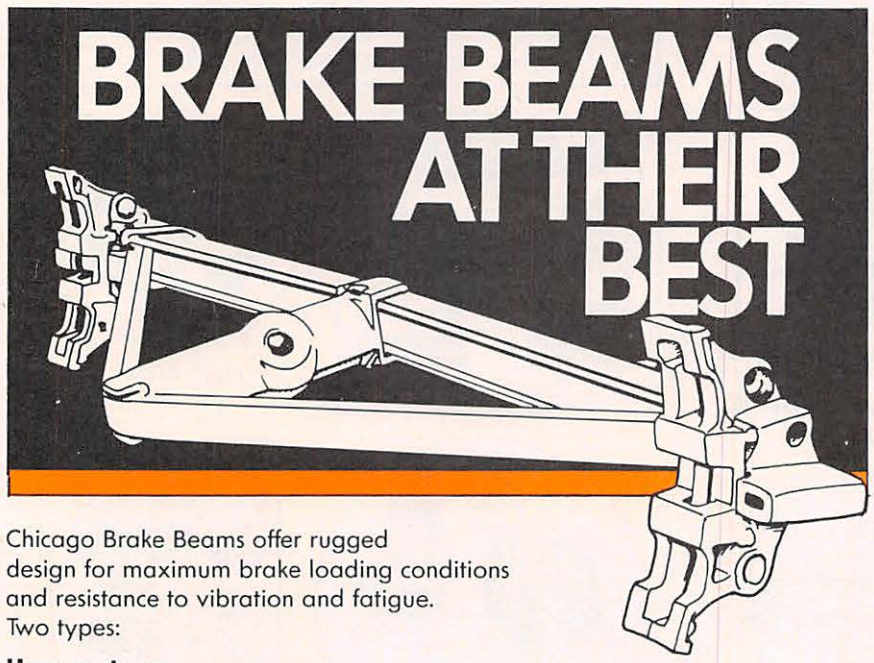
The "L" it is

Bellevue, Wash.

To the Editor:

For many years the elevated in Chicago has been known as the "L". In recent issues your usually 100% accurate magazine has been referring to it as the "El". This is a New York term, not applicable in Chicago.

Philip B. Korst



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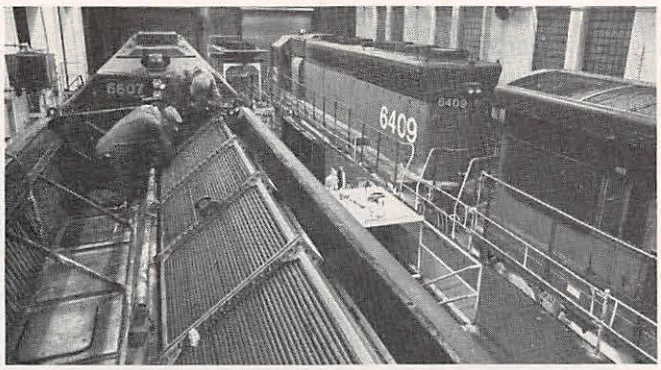

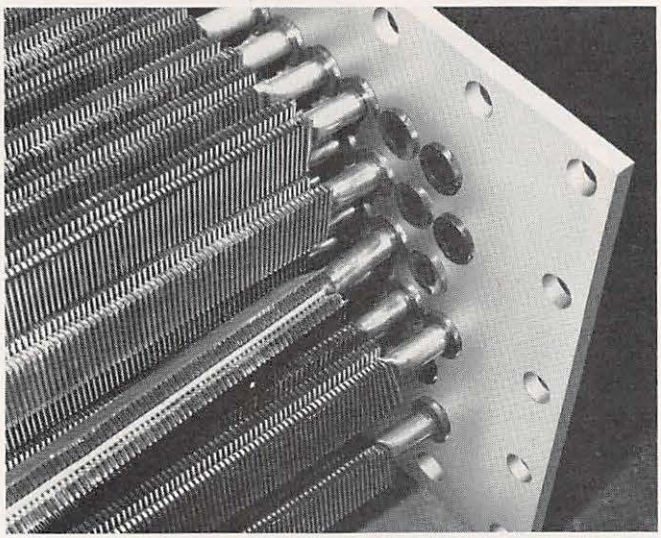

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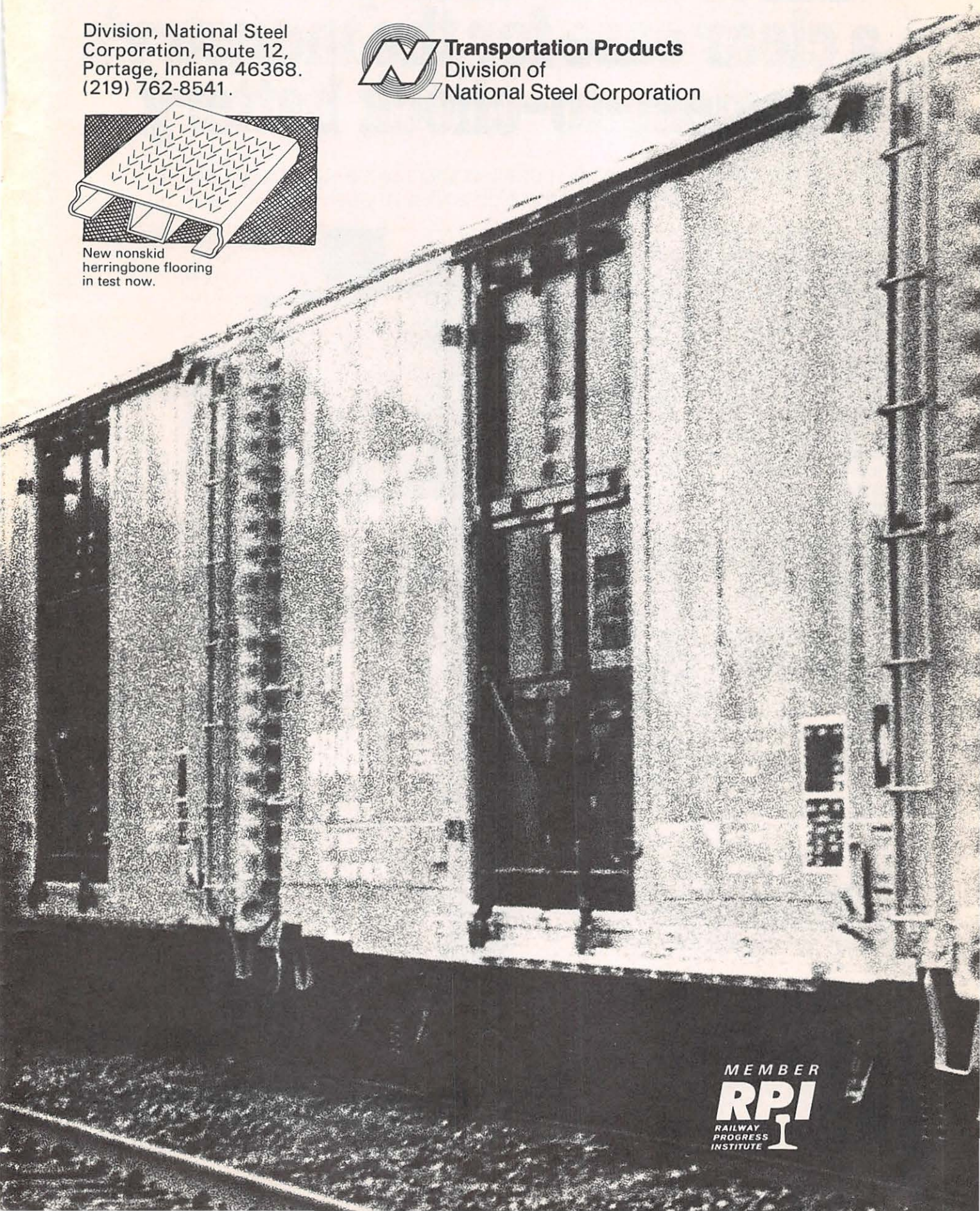

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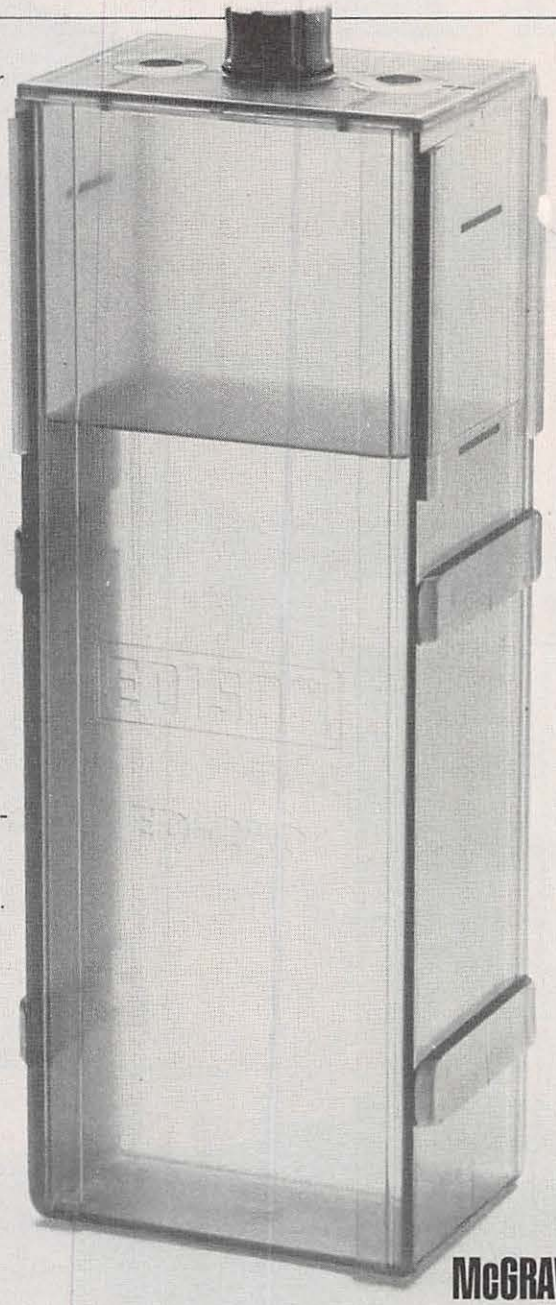
For more information, write: McGraw-Edison Company, Power Systems Division, P.O. Box 28, Bloomfield NJ 07003.



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REVENUE FREIGHT CARLOADINGS

Commodity	Aug. 18 week	Aug. 11 week
Grain	30,346	28,692
Farm products	2,743	2,979
Metallic ores	41,977	40,721
Coal	110,734	105,832
Crushed stone, gravel & sand	18,874	19,082
Nonmetallic minerals	16,787	16,599
Grain mill products	17,808	17,626
Food and kindred products	18,574	17,908
Primary forest products	22,050	21,027
Lumber & wood products (except furniture)	12,374	12,046
Pulp, paper & allied products	21,450	21,133
Chemicals & allied products	27,992	27,114
Petroleum products	6,308	6,298
Stone, clay & glass products	19,565	19,202
Coke	6,573	6,915
Metals & products	18,333	17,501
Motor vehicles & equipment	13,788	13,050
Waste & scrap materials	14,087	13,705
Forwarder & shipper assn. traffic	12,568	12,265
All other carloads	45,195	44,394
LCL traffic	392	418
Total cars loaded	**478,518**	**464,507**
Cumulative total,	**1979**	**1978**
33 weeks	**15,065,692**	**14,458,368**
Estimated revenue ton-miles (billions)		
33 weeks	**562.8**	**532.2**

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended Aug. 11 totaled 34,873 cars (2.7% below the corresponding 1978 week) and 61,601 trailers or containers (down 1.2% from 1978). Cumulative volume for the first 32 weeks of 1979 is 1,143,555 cars (up 2.4% from 1978) and 2,020,175* trailers or containers (up 4.8% from 1978).
*Revised

CANADIAN CARLOADINGS

Canadian railway revenue freight loaded in the seven-day period ended Aug. 7 totaled 4.8 million tons (down 3.8% from 1978). Cars loaded totaled 68,811 (down 4.0% from 1978). Cumulative loadings for 1979 were up to 152.2 million tons (up 12.7% from 1978).

● *Davidson-Kennedy.*—Announced the sale of two additional Rail Pick Up Units, one to Santa Fe and one to Union Pacific. This brings to 13 the total number of such units sold since they were introduced in 1969. The units pick up released cwr or bolted rail in strings 1,400 feet long; they can pick up as many as 24 strings a day. Rail can be picked up from both sides of the track simultaneously.

● *Grand Trunk Western.*—Has installed a Houston H-3000 electronic refueling system and as a result expects to save 250,000 to 400,000 gallons of diesel fuel annually. The new system, which requires special fuel-tank couplings on locomotives compatible with hose nozzles at fueling stations, operates electronically to prevent leaks and spills. It automatically shuts down in event of an accident.

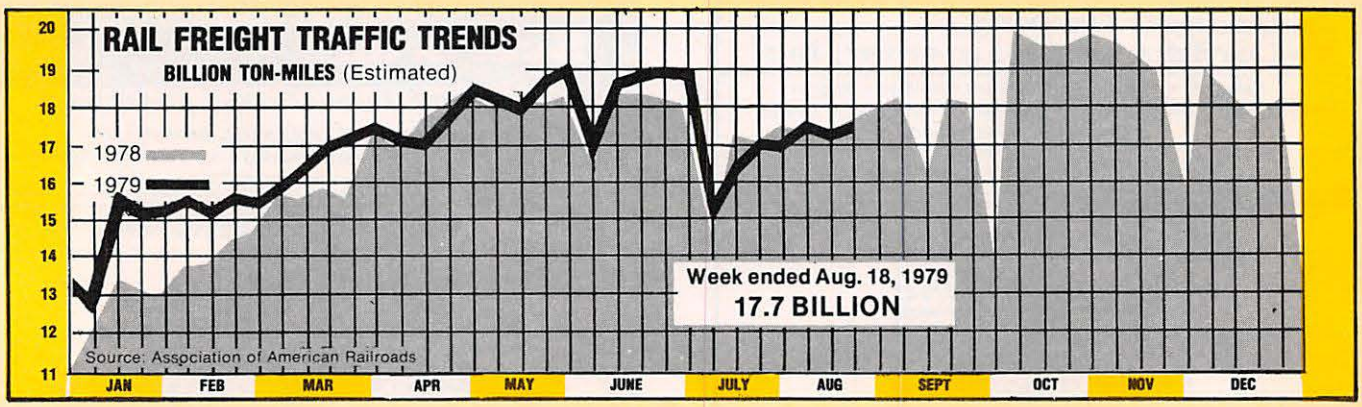
● *Missouri-Kansas-Texas.*—Capital program for 1979 now totals $30 million. Major items include eight 3,000-hp SD-40 locomotives from EMD; 100 open-top hoppers from company shops; 100 jumbo covered hoppers from Pullman Standard; 100 small-cube covered hoppers from ACF; 100 gondolas from Ortner. Also in the equipment program are 51 62-ft DFC boxcars and 17 auto-racks. A major piggyback terminal at Tulsa and a high-speed fueling facility at Waco are among the major facility improvements planned.

● *National Railway Utilization Corp.*—Announced placement of $30 million of 14-year, 11-3/8% conditional sale agreements with Connecticut General Life Insurance Co. and John Hancock Mutual Life Insurance Co. NRUC will use the funds to expand its fleet of general purpose boxcars.

● *New York City Transit Authority.*—Awarded a $1.8-million contract to the Farrel Rochester Division, USAM Corp., for wheel mounting and demounting presses, wheel boring machines, and materials handling equipment to be installed in NYCTA's Coney Island Shops.

● *Southeastern Pennsylvania Transportation Authority.*—Westinghouse Electric will supply solid-state chopper controls and auxiliary equipment for 141 new light rail cars that Kawasaki Heavy Industries of Japan is building for SEPTA.

● *XTRA, Inc.*—Has acquired 1,250 covered hopper cars for lease to grain and industrial shippers this year and next, and has ordered 200 coal hopper cars for late 1979 delivery, at a total cost of $60 million. XTRA, previously known primarily as a lessor of piggyback trailers and marine containers, recently announced that it had placed orders for 2,000 additional piggyback trailers valued at $22 million. When delivery is completed in December, the XTRA piggyback fleet will total more than 32,000 units.



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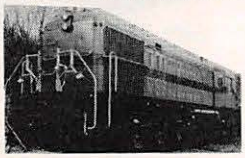
50 ton I. Brownhoist Loco Crane 60' boom 1962 GM 671 eng.



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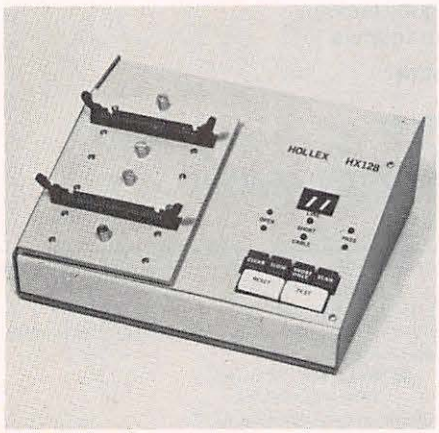
Products Report

Forest products cars

Two specialized railcars offered by Ortner Freight Car Co. are designed for transporting long and short wood from forest to mill and for efficient use with existing materials handling equipment. The 100-ton log car (photo) carries more than four legal truckloads of full-length plywood and pulpwood logs. Wood in lengths of 17, 25, 34, and 60 feet can be carried in various patterns. Log bolsters and posts are designed for easy loading/unloading with conventional log-handling equipment. The 70-ton wood rack car handles 32 cords of short wood. Of all-welded construction with steel channel side sills to withstand abuse in loading/unloading, it has a "fish belly" center sill for strength and rigidity. A slotted floor facilitates cleaning.

Circle 100 on Reader Service Card



Flat-cable tester

An inexpensive tester for ribbon cable assemblies, offered by Hollex, Inc., includes self-contained fixturing that uses interchangeable adapter boards. Terminations including socket, plug, DIP, D-type, microribbon, etc., are included, so cables with dissimilar or single terminations can be tested on the spot. A Fast Test feature allows pass-fail testing. The Slow Test identifies the faulty connector and the type of fault. A repetitive Scan mode is provided for intermittents, and a Shorts Only mode for single-ended cable testing. Price: $550.

Circle 101 on Reader Service Card

Car, locomotive cleaner

For removing a variety of tenacious soils from railroad and other transportation equipment, a new, heavy-duty alkaline liquid offered by Oakite Products, Inc., can be applied by mechanized steam, spray, or foam equipment. Fleetline 213 removes caked-on grease, oil soils, carbonized deposits, brake shoe dust, and fuel residues that build up on diesel engines, railroad trucks, and rolling stock. Also recommended for fleet maintenance shops to clean chassis, fifth wheels, and motor blocks.

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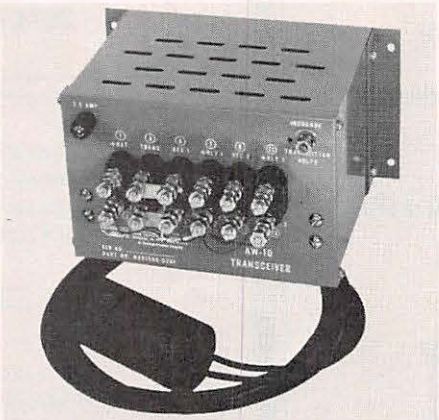

Crossing warning device

A new warning device offered by WABCO's Union Switch & Signal Division for detecting the presence of a train at highway grade crossings is particularly suitable for use at locations such as branch lines where maximum train speed is under 10 mph or where rails are rusted due to light use and where directional detection is desired. The AW-10 Directional Area Warning Device consists of a transceiver unit and two transponders, one at the start of each approach. Compared to conventional dc or ac-dc (type "C") track circuits, the AW-10 requires no insulated joints and has greater sensitivity; no line wires, power drops, or housings are required for the approaches as with conventional AFO track circuits. Less expensive and easier to maintain than motion-monitoring devices, the AW-10 does the work of two AFO transmitters and receivers. Its high frequency provides superior shunting sensitivity and good block definition with block lengths up to 600 feet. The integrity of the track circuit is checked out to the approach limits. The 9 3/16x11x6-inch transceiver is suitable for wall or shelf mounting; the transponders—2 3/8 inches in diameter, 4 1/2 inches long—are buried at the approach ends and require no mounting.

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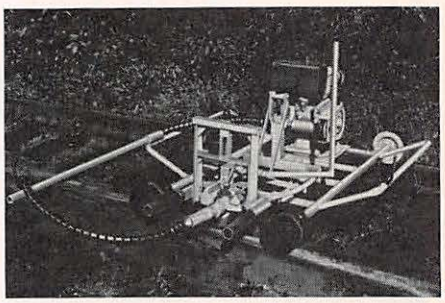

Switchpoint, surface grinder

For use by railroad field welding gangs, a new frog, switchpoint, and surface grinder is offered by Railway Track-Work Division of Evans Products Co.'s Transportation Systems and Industrial Group. The Model E-49 employs a power take-off and 10-foot flexible shaft with a built-in straight-wheel hand piece that is angled to various positions to perform the desired work. It is designed to use all RTW grinding attachments for rail joint slotting, remote grinding of the base, web, under the rail head or on off-track areas. The grinder is designed for easy operation and good visibility of the working area; with it, even unskilled operators with minimum training are said to produce a finished surface that meets all specifications. The grinder is 68 inches long, 54.5 wide, 24.5 high; weighs 400 pounds; and has a 5/8-inch by 10-foot flexible shaft and an 8 × 1 × 1-inch grinding wheel, powered by a 10-hp air-cooled engine, automatic clutch, and V-belt drive.

Circle 104 on Reader Service Card

Largest rubber grade crossing

What is said to be the world's largest rubber grade crossing system has been installed in Madison, Wis., where nine tracks of the Milwaukee Road cross Washington St., allowing highway traffic to cross the tracks smoothly and at a normal speed. Using the Parco rubber grade crossing system offered by Park Rubber Co., 7,200 square feet of rubber pads were installed without a single lag bolt or drive spike. Tension steel cables passing longitudinally through channels cast in each pad section secure the pads in place, while the interlocking tongue-in-groove

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Advertisers Index

ACF Industries, Inc. 27
Aeroquip Corporation, Gustin-Bacon Div. 108
American Steel Foundries, Div. Amsted Industries 5
Amtrak 90

Berwick Forge & Fabricating Corp. 35
Buffalo Brake Beam 126
Burro Crane, Inc. 137

Camcar, Division of Textron Inc. 44
Cardwell Westinghouse Company ..... I.F.C.
C & D Battery 124
Chicago Brake Beam 132

Dayco Corporation Plastic Products Div. 67
Difco, Inc. 45
Dowty Corporation 82
Dresser Transportation Equipment Co. ..... B.C.

Ellcon National, Inc. 51
Evans Products Company 18-19

Fairbanks Weighing Division, Colt Industries 110
Ford, Bacon & Davis 71
Fruit Growers Express 121

General Battery Corporation 97
General Electric Company 100-101
General Electric Credit Corp. 6
General Railway Signal Co. 8-9
Greenville Steel Car Company 81
Griffin Wheel Co., Div. Amsted Industries 42-43
Grif Teller Calendar 114
GTE Transmission Systems 102-103

Harmon Industries ..... 16 & 47
Haveg Industries, Inc. 111
Hoesch America, Inc. 15
Holland Company, Freight Equipment Div. ..... 61 & 87
Huck Manufacturing Co. 74-75

Isringhausen 20

Jackson Corp. 33

The Kerite Company 46
Keystone Railway Equipment Co. 127
Koppers Company, Inc. Forest Products Division 11

L & M Radiator, Inc. 133

McGraw Edison Company, Edison Battery Div. 136
McGregor (Paving) Ltd. 138
MacLean-Fogg Company 97
Marine Electric Railway Products 59
Marine Industries, Ltd. 55
Mecanoexportimport 130
Midland Insurance Company 128
Miner Enterprises, Inc. 78-79

Naporano Iron & Metal Company 138
National Castings, Div. of Midland-Ross 41
National Steel 134-135
New York Air Brake Company, A Unit of General Signal 56-57

NL Industries, Inc. 119
Nox Crete Chemicals, Inc. 125

Ogontz Controls Company 96
The Ohio Brass Company 63

Penetone Corporation 138
Pettibone Corporation 21
Porter Inc., Railcar Division 77
Railway Products Division 40
Power Parts Company 99
Power Parts Sign Company 116
Pullman Standard 22-25

The Rails Company ..... 106 & 116
Railroad Dynamics, Inc. 122-123
Railtech Ltd. 116
Railway Educational Bureau 26
RMC Division, Portec, Inc. 130

Safetran Systems Corporation 109
Schaefer Equipment 54
Schweizerische Aluminium AG 36
Servo Corp. of America 104-105
Standard Car Truck Co. 13
SES, Inc. 112
Solid State Sonics/Electronics 106
Speno Rail Services Inc. 83
Stanray Division of Abex Corp. 107
Sumitomo Metal Industries Ltd. 17

Taylor Machine Works, Inc. 115
Timken Company 88
Townsend Fastening Systems Division of Textron, Inc. ..... I.B.C.
Transandean Associates 114
True Temper Corporation 117

United States Gypsum Company 113

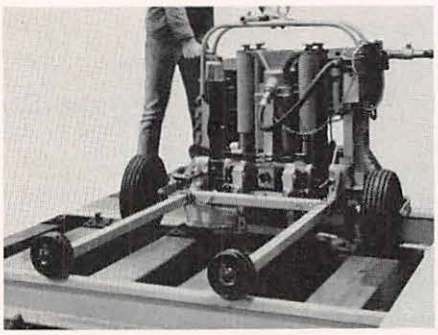
Vapor Corporation Transportation Systems Division 80

Wabco—RR Friction Products Corp. 92
Westinghouse Air Brake 72-73
Union Switch & Signal Division 64-65
Western-Cullen Hayes, Inc. ..... 129 & 131

Youngstown Steel Door 58

joints between pads protect the crossing subgrade against deterioration caused by moisture seepage and contamination. The system, which qualifies for federal funding, is said to be easy and economical to install and maintain.

Circle 105 on Reader Service Card



Muffled spike driver

A special muffler reduces noise and operator fatigue as the Abex Dual Driver DD4-M spike driver automatically positions and drives two spikes simultaneously, 2,400 spikes per hour. One man can remove the compact unit from the tracks, and it can be run with either an on-track or off-track compressor.

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Mixes kill more weeds

For weed control along railroad rights-of-way, Ciba-Geigy Corp.'s Atratol 80W may now be tank-mixed with Karmex 80W (diuron 80W) or Princep 4L or 80W for longer residual control of late-germinating broadleaf weeds and grasses, particularly crabgrass. The revised, ERA-accepted label states that the tank mixes should be applied shortly before weed growth begins or postemergence to young plants not over six inches tall. When applied to the soil, the herbicides usually control plant growth for one growing season; they should not be used near desired trees, shrubs, or plants.

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Service truck body

A new truck body combining the convenience of a walk-through van with the multiple compartments of a service body is offered by Reading Body Works, Inc., for use on the Ford E-350 and the Chevrolet G-30 dual-wheel chassis. The all-steel Ready-Van has 12 exterior compartments with shelves and adjustable bin dividers for weatherproof storage of tools, parts, and equipment. The interior provides sheltered work or cargo space accessible from the cab or through the two rear doors, plus two full-length shelves and accessibility to four of the exterior compartments. Double-panel compartment doors of zinc-coated steel have heavy-duty slam-action locks, the lock cylinders guaranteed to the original owner for the life of the body when properly maintained. Body panels are precision-formed of heavy-gauge steels and electric-welded to the understructure of multiple U-beam girders braced and reinforced at stress points.

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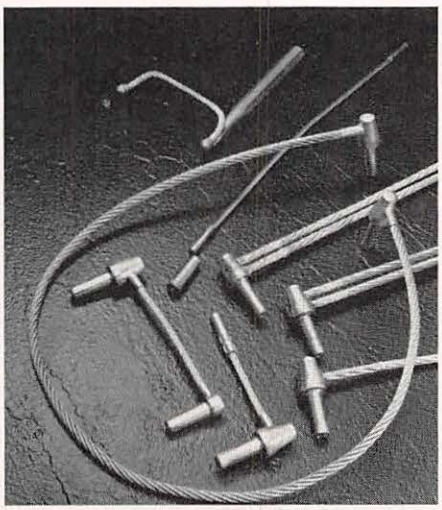

Track circuit bonds

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New Literature

ELECTRONIC EQUIPMENT SHELTERS with insulated, fiberglass exteriors to protect remote equipment from weather, water, bullets, and bugs are described in a 6-page color brochure offered by Glass-Vault Manufacturing.

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TOUGH FASTENER. Exceptionally high shear strength of its Cherry Monobolt fastener is described in a brochure offered by Cherry Commercial Fasteners, Townsend Division of Textron, Inc.

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MICROWAVE RADIO LINK. A 4-page brochure describing its 700F1 RF Repeater, an intermediate link between two microwave radio terminals, is offered by GTE Lenkurt, Inc.

Circle 114 on Reader Service Card

PRESSURE PLUGS. An 8-page guide to specifying, buying, and using dryseal, flush-type, and teflon-coated pressure plugs for fluid power aplications is offered by the Unbrako Division of SPS Technologies.

Circle 115 on Reader Service Card

VACUUM CLEANERS. A 16-page brochure showing how Hi-Vac heavy-duty vacuum cleaners can be used to clean out rail cars, and pneumatic conveyor units can be used for loading/unloading cars is offered by NFE International Ltd.

Circle 116 on Reader Service Card

BACKHOE/LOADERS. Specifications and advantages of its Series III four-wheel drive Dynahoe backhoe/loaders are presented in literature offered by Bucyrus-Erie Co.

Circle 117 on Reader Service Card

TRACK SCALES. An 8-page bulletin describing the new Fairbanks line of self-contained (no-pit), fully electronic, railroad track scales is offered by Fairbanks Weighing Division of Colt Industries.

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AID FOR EXPORTERS. A 250-page book to aid exporters and would-be exporters includes information on locating agents and distributors, source of market information and of trade leads (with addresses and phone numbers), financing and loan date, credit information, shipping information, and a 60-page bibliography of useful publications (many available at no cost) is offered by Washington Researchers, 918 16th St., N.W., Washington, D.C. 20006. Price: $30.

LOCKBOLTING with the Townsend Lightweight

Townsend's new line of Lockbolt Tools are trimly balanced, easier to handle — 15 to 28% lighter than competition's! Which means reduced operator fatigue, increased productivity.

Lighter in weight as they are, Townsend Tools have all the muscle needed to meet the most demanding performance standards. The new patented design takes advantage of high strength metal, heat-treated and precisely dimensioned. Center line of nose to barrel diameter permits access even in restricted clearance areas. Check the facts on Townsend's new lightweight tools. Townsend Fastening Systems, Townsend Division of Textron Inc., P.O. Box 71, Ellwood City, PA 16117. In Canada: Parmenter & Bulloch, Gananoque, Ontario.

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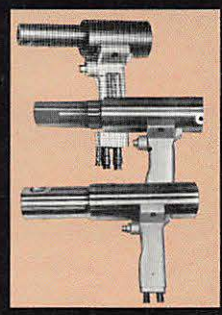
5/8" & 3/4"	2200	17.0 lb.	22.5 lb.	25%
7/8"	2300	22.0 lb.	31.0 lb.	28%



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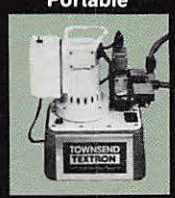
Portable



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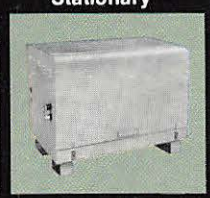

LOCKBOLTS
from 3/16"- 7/8". Head style and material to meet exact needs.

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Townsend Division of Textron Inc.

DRESSER'S NEW

CAST DRAFT SILL

This new Cast Draft Sill exhibits major improvements in operating characteristics over other draft sills now being used!

It all adds up for you. Dresser's new Cast Draft Sill has been developed using finite element analysis to determine the exact metal sections required in all areas. The result is a design substantially lighter in weight than other available designs and, as well, being fully capable of withstanding the loading requirements for cast draft sills.

For example, Dresser's new Cast Draft Sill can withstand, without yielding, a 900,000 lb. draft load and a 1,000,000 lb. buff load.

In addition, the design utilizes the well-proven Low-Profile® center filler and its adherent advantages: light weight along with high structural integrity, flame hardened center plate with good wear resistance, and relative ease of replacement if required.

Dresser's new Cast Draft Sill is available to suit either "E" or "F" couplers with the standard hopper car overhang of 4′-11½″ for the "E" coupler design and 4′-11¾″ for the "F" coupler design. The "F" coupler design is also suitable for use with currently available rotary coupler arrangements.

Get the facts.
We invite you to contact us for detailed information on the better Cast Draft Sill.

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